An Investigation of Contextual Factors and Dispositional Characteristics in the Career Development of Hmong American and Caucasian American College Students: A Comparison Study Using a Social Cognitive Career Theory Perspective

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Txhua tus yeej xav muaj ib lub hom phiaj yus yuav mus kawm txog, ib pawg neeg ua qauv rau yus saum thiab ib pawg neeg uas qhuas los yog ntseeg hais tias yus yuav kawm tau. Kuv zoo siab hais tias kuv muaj tag rho peb yam no nyob rau haum kuv lub neej es kuv thiaj li kawm tiav. Qhov uas kuv mus kawm tau doctor no twb pib ua ntej kuv tuaj kawm nyob rau haum lub tsev kawm ntawv no lawm, nws twb pib puag thaum kuv muaj 13 xyoos los lawm. Yog hais tias tsis muaj cov neeg li hais haum qab no txhawb thiab hlub kuv, tej zaum hnub no kuv yuav kawm tsis tiav kuv daim ntawv doctor.

Rau txhua yam hwv tsam uas kuv muaj nyob rau haum kuv lub neej, kuv muaj txiaj ntsim heev rau kuv niam uas yog Kab Yeeb Vaj thiab kuv txiv uas yog Vaj Txoo Tsab. Kuv pom tau hais tias kuv muaj hmoo heev, tau ib yam khoom plig zoo uas yog muaj niam muaj txiv uas saib kev kawm ntawv muaj nuj nqes thiab txhawb yam no ua thawj thawj yam nyob rau haum nkawv cov me nyuam lub neej nrog rau nkawv tus kheej lub neej. Yog hais tias tsis muaj nkawv txoj kev cia siab rau kuv thiab txoj hauj lwm uas kuv tau txiav txim siab los mus ua, ib yam uas nkawv tsis paub meej los yog tsis nkag siab li, lub hom phiaj no yuav tsis tiav. Kuv zoo siab hais tias kuv muaj cov nus muag thiab cov xeeb ntxwv uas hlub kuv thiab ua siab ntev tos kuv kawm kom tiav, vam hais tias kuv yuav txais daim ntawv doctor thiaj li yuav tau rov los nrog lawv nyob ua ke txawm hais tias yuav siv sij hawm ntev npaum li cas los yog yuav tsis muaj sij hawm los saib lawv li. Tsis tas li ntawd, kuv xav ua tsaug rau tsev neeg Vinson, rau Ted thiab Nancy rau tag rho nkawv cov lus zoo uas nkawv hais thiab foom rau kuv, nrog rau Greg, ua kuv tus khub nyob ntawm kuv ib sab txhua lub sij hawm thaum kuv tu siab es xav hais

tias yuav tso tseg los yog txhua lub sij hawm thaum kuv zoo siab es xav hais tias tej zaum kuv yeej yuav kawm tau thiab.

Kev kawm thiab kev sau phau ntawv no yeej tsis tiav yog hais tias tsis muaj cov xib fwb nrog rau tag rho cov neeg ua hauj lwm uas pab coj nruj. Dr. Hansen uas yog kuv tus xib fwb, tau siv sij hawm ntau thiab tag rho nws lub zog los pab qhia thiab txhawb kuv sau phau ntawv no, tsis tso kuv tseg rau txoj kev kawm no uas kuv tsis paub meej li. Tsis tas li ntawd, kuv xav ua tsaug rau Ms. Amy Kranz uas “tau pab saib xyuas kom kuv tsis txhob poob qab.”

Kawg nkaus no, kuv xav hais ib lo lus ua tsaug rau Ntsuab Vaj Lis uas tau siv zog kawg pab txhawb kuv txhua lub sij hawm nyob rau haum kuv txoj kev kawm, qhov loj tshaj plaws, kuv xav ua tsawg rau txoj kev uas nws pab txhawb peb cov tub ntxhais Hmoob Mis Kas kawm ntawv kom tiav nyob rau haum lub tsev kawm ntawv qeb siab Univeristy of Minnesota. Kuv xav ua tsaug rau tag rho cov tub ntxhais Hmoob Mis Kas, cov xib fwb txhua tus nrog rau tag rho cov neeg ua hauj lwm uas tau siv lawv lub sij hawm los koom nrog kuv txoj kev kawm no, pab kuv sau phau ntawv no kom tiav. Kuv vam hais tias txhua yam uas kuv tau ntsuas xyuam, sau nyob rau haum kuv phau ntawv no, yuav raug siv los pab txhawb peb cov Hmoob Mis Kas kawm yam uas lawv xav kawm kom tau.

ABSTRACT

This study investigated race/ethnic and sex comparisons among 182 Hmong American and 198 Caucasian American college students in regards to specific career development variables. Hmong American college students reported more perceived educational and career barriers and fewer resources (e.g., career decision-making self-efficacy, family support) than did Caucasian American college students. Caucasian American female college students reported more perceived educational and career barriers and less career decision-making self-efficacy than did their male counterparts. Contrary to expectations, Hmong American female college students reported more role model support than did their male counterparts. These results suggest that relations among career variables are likely to vary by sex and race/ethnic group membership, which supports the need to investigate these relations among different minority groups.

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CHAPTER 1

Introduction

Career development research that has investigated contextual factors (e.g., perceived educational and career barriers, family support, role model support) and dispositional characteristics (e.g., career decision-making self-efficacy, coping self-efficacy with perceived education and career barriers, positive affect, optimism) among minority group members have found that women and racial/ethnic minority students generally reported more perceived barriers, less support (e.g., family support) and lower confidence (e.g., career decision-making self-efficacy) than did non-minority group members in regards to their career choice process (e.g., Luzzo & McWhirter, 2001). Furthermore, studies have shown that perceived barriers, support and confidence detrimentally affect minority group members' career development and success (e.g., Constantine, Wallace, Kindaichi, 2005; Lopez & Ann-Yi, 2006; Weiss, 2000). Despite these results for minority member's career development, less information is known about how both sets of variables affect the career development of smaller and more recent refugee immigrant groups such as Hmong Americans. Authors such as Leong and Hartung (2000) have noted the problems with generalizing research results from one minority group to another minority group without relevant data. This study extends the current career development research by investigating the effects of contextual factors and dispositional characteristics on the career development of Hmong American and Caucasian American college students.

Researchers examining the career development of minority groups (e.g., Tang, Fouad, & Smith, 1999; Weiss, 2000) have found that contextual factors generally do

affect the career choice of minority group members. Tang and colleagues (1999) found that in an Asian American college student sample family support was more important in their career choice than their reported career interests. Moreover, research indicates that contextual factors might play a larger role in the career development of minority groups compared to their Caucasian American counterparts (e.g., Leong, 1995; Tang et al., 1999). Additionally, different minority groups report varying degrees of experiences with contextual factors. For example, Lopez and Ann-Yi (2006) found that Hispanic American women reported more career barriers than did African American and White American female college students. These results suggest that dispositional characteristics and contextual factors might differentially affect the career development process of various minority groups.

Dispositional characteristics investigated in career development research have included self-efficacy beliefs such as career decision-making self-efficacy and coping self-efficacy. *Career decision-making self-efficacy* is defined as a person's perceived ability to make successful career decisions (Betz, 1992, 2000, 2004; Betz & Hackett, 1981, 2006). In other words, how well a person thinks that she or he can successfully navigate the career decision process. *Coping self-efficacy* was developed from the career research literature investigating perceived educational and career barriers and assesses the extent to which a person believes she or he can cope with a perceived barrier. For example, *coping self-efficacy with educational barriers* measures the degree to which a person believes she or he could cope with a potential educational barrier such as "not knowing how to study." Past research results indicated that racial and ethnic minorities reported lower levels of career decision-making self-efficacy and coping self-efficacy

than did their Caucasian American counterparts (e.g., Luzzo & McWhirter, 2001; Lopez & Ann-Yi, 2001; VilaCruz, 2003).

Other dispositional characteristics such as affect and optimism also have been investigated in career development research. The majority of research on affect and career development has found a strong relation between anxiety (i.e., negative affect) and career decidedness (e.g., Bordin, 1946; Crites, 1974; Goodstein, 1965). Conversely, Schmidt (2003) found that students who reported more positive affect reported being more decided about their career choice. Additionally, several researchers also have noted the potential benefits of optimism in establishing career plans (Creed, Patton & Bartrum, 2004; Lucas & Wanberg, 1995; Marko & Savickas, 1998). *Optimism* refers to a generalized expectation that good things will happen in the future (Scheier & Carver, 1985). The impact of optimism and affect on the career development of Hmong American college students also was investigated.

The extant career development research on minority groups finds that women and racial/ethnic minority students generally report significantly more perceived educational and career barriers, and lower levels of coping self-efficacy, career decision-making self-efficacy, family support, role model influence and career decidedness than do male and Caucasian American college students (e.g., Lopez and Ann-Yi, 2006; Luzzo, 1993; Weiss, 2000). Furthermore, these differences appear to affect the career development and success of minority students. Because the current career research on racial and ethnic minority groups tends to investigate the career development of racial and ethnic groups with more history in the United States, little is known about the career development of more recent refugee immigrant groups such as Hmong Americans. No previous research

has investigated specific contextual factors and dispositional characteristics in the career development of Hmong American college students. The primary objective of this study was to extend the research on contextual factors and dispositional characteristics to a recent refugee immigrant group, Hmong Americans. To accomplish this objective, this study investigated how contextual factors (i.e., perceived career barriers, perceived educational barriers, family support and role models) and dispositional characteristics (i.e., positive and negative affect, optimism, and self-efficacy beliefs) relate to career outcomes (e.g., career decidedness) in a sample of Hmong American college students. Results for Hmong American college students also were compared to Caucasian American college students to investigate sex and racial/ethnic comparisons.

Literature Review

The following review was arranged into several sections. The first section provides a general overview of Social Cognitive Career Theory (SCCT) by introducing relevant SCCT variables and summarizes how the SCCT framework has been used to conduct research with groups that are underrepresented in the vocational psychology research literature. Next, background information on the disadvantaged group being investigated in this study, Hmong American college students, is presented. Finally, this section concludes with the theoretical and practical contributions of the study.

Social Cognitive Career Theory

Lent and colleagues (1994) extended Social Cognitive Theory (Bandura, 1986) into career development and proposed this new theory as Social Cognitive Career Theory (SCCT). Social Cognitive Career Theory (SCCT) highlights the interplay among a number of *cognitive variables* (i.e., self-efficacy, outcome expectations, and personal

goals), *person factors* (e.g., gender, ethnicity, social support, perceived barriers), *contextual variables* (e.g., discrimination, barriers, supports), and *self-efficacy beliefs* that might influence an individual's choice in career development (Lent et al., 1994; 2000). These authors utilized Bandura's (1986) triadic reciprocal model to provide a structure to account for the interplay among people, their behaviors, and the context in which they make a career choice. The *triadic reciprocal model* is defined by Bandura (1986) as a fully bidirectional model; he asserts that each part functions as an interactive set of factors that jointly affect each other. The three basic theoretical elements—self-efficacy, outcome expectations, and goals—are hypothesized as interacting in concert with the person/contextual factors. In other words, SCCT is an extension of an interactionist perspective, conceptually similar to a long line of interactionist models that tend to emphasize the reciprocal relationships among persons, contexts and behaviors (e.g., Bandura, 1986; Dawis & Lofquist, 1984; Lewin, 1951). This study focused on self-efficacy factors; however, a review of all three variables (i.e., self-efficacy, outcome expectations and goals) was presented to provide a context for this study.

Self-Efficacy. According to Bandura (1986), *self-efficacy* refers to "peoples' judgments about their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). Lent and colleagues (1994) extended this definition of *self-efficacy* into the domain of career development by postulating that self-efficacy beliefs about one's career development and success also influence her or his choice and attainment of a specific career choice. Similar to Bandura (1986, 1997), Lent and colleagues also believed that self-efficacy beliefs about one's career were developed,

shaped and changed by factors such as *performance accomplishments*, *vicarious learning, physiological and affective states*, and *verbal persuasion* (Lent et al. 1994)

Performance accomplishments (i.e., enactive mastery experiences) are the most effective means of developing, shaping and changing self-efficacy beliefs because performance accomplishments offer the most convincing evidence that a person will succeed or fail in a given situation (Bandura, 1997). The more successful experiences a person has in one domain will likely increase a person's self-efficacy beliefs in that domain whereas the more unsuccessful experiences a person has in one domain will likely decrease a person's self-efficacy beliefs in that domain. For example, a student who receives "As" in all of her math classes is likely to have confidence in her math ability whereas another student who receives "Ds" in her math classes is likely to lack confidence in her math ability. This connection between self-efficacy and performance accomplishments suggests a link between, "how well a person thinks they will perform" and his or her actual performance.

Another source that can influence self-efficacy beliefs is *vicarious learning* (i.e., observing others' successes and failures). Furthermore, Bandura (1986) proposed that observing an individual who is more similar to us (e.g., same sex, ethnicity) succeed in a given activity will likely increase our own self-efficacy beliefs about a similar situation. For example, a Hmong American female student might be more likely to think she can become a physician if she observes other Hmong American women becoming physicians. Alternatively, the Hmong American female student might be more likely to think she cannot become a physician if she observes other Hmong American women failing in their plans to become physicians. This proposed link between self-efficacy and vicarious

learning highlights the importance and need for successful role models in a person's environment.

Although Bandura (1986) acknowledged that verbal persuasions alone do not provide enough power to generate significant and lasting changes in self-efficacy beliefs, he did assert that verbal persuasions that fall within realistic expectations are likely to enhance a person's self-efficacy beliefs. In other words, a person's belief in whether she or he can accomplish a specific behavior is greatly strengthened when significant others express belief in the person's ability to achieve the intended result as long as the expected accomplishment is realistic in nature (Bandura, 1982, 1984, 1986, 1997).

Information about one's self-efficacy beliefs also can be generated from physiological and affective states; people depend on physiological (e.g., elevated heartbeat, excessive perspiration, shortness of breath, etc.) and emotional states (e.g., anxiety) in appraising their abilities (Bandura, 1986; Betz, 2000). Unwanted physiological and emotional states tend to influence a person's performance negatively, which can lead to a reduction in self-efficacy beliefs in that specific domain. For example, when a person experiences profuse sweating, stuttering and anxiety in public speaking, she or he might be more likely to believe that she or he is bad at public speaking.

Outcome Expectations. Lent and colleagues (1994, 1996) propose that whereas self-efficacy beliefs are concerned with an individual's capability to behave successfully in a situation (i.e., can I do this?), *outcome expectations* involve the imagined consequences of actually performing the behavior (i.e., "if I do this, what will happen?"). Three types of learned experiences shape *outcome expectations*: physical effects (e.g.

physical pleasure and pain), social effects (e.g., perceived approval and recognition by others, disapproval and social rejection by others), and self-evaluations (e.g., thinking one is good or bad at something). For example, if an individual imagines that a behavior will cause pain, she or he is less likely to engage in the behavior.

Goal Representation. Bandura (1986) posited that goals play an important role in guiding behavior; *goals* are defined as an individuals' intention to engage in a particular activity to influence a specific outcome. Goals help people organize and guide their behavior, sustain their behavior over time, and increase the likelihood that the desired outcomes will be attained. Career plans, decisions, aspirations, and expressed career choices are essentially goal mechanisms.

In summary, the SCCT model provided a social cognitive framework for understanding an individual's career development. Lent and colleagues (1994) developed SCCT to emphasize the dynamic interaction among self-efficacy, outcome expectations, and personal goals in the self-regulation of career-related behavior. In the next section, I briefly reviewed how these factors influence the remaining SCCT components in relation to the three models (i.e., career interest development, career choice process and career performance). Following this review, I presented the empirical literature pertaining to the various SCCT components.

SCCT Models

Social Cognitive Career Theory proposes three distinct models which include (a) the development of academic and career interests (i.e., career interest model), (b) the formation of educational and vocational choices (i.e., choice model), and (c) the nature and results of performance in academic and career spheres (i.e., performance attainment

model). Each of these models contain the three basic theoretical elements previously discussed (i.e., self-efficacy, outcome expectations, and goals representation) which are hypothesized to interact with the person/contextual factors. In other words, within each of these models, these three variables interact with person and contextual factors to produce specific career outcomes. For example, in the career interest model, self-efficacy, outcome expectations, and goals would interact with person and contextual factors to form specific career interests. Although this study specifically focuses on the Career Choice Model, I review each model to place the Career Choice Model within context.

SCCT Career Interest Model. Hansen (1984) defined career interests a as a person's particular pattern of likes, dislikes, and indifferences in relation to career-relevant tasks In the SCCT career interest model, Lent and colleagues (1996) hypothesized that career interests are derived from dispositional, experiential and cognitive variables and influence choice behavior and skill acquisition. Additionally, these authors suggest that a constant interplay exists between self-efficacy, outcome expectations and personal goals in relation to career interests (Lent et al., 1994). From this model, these authors proposed that long lasting career interests tend to develop in the domains in which people perceive themselves as capable and when they believe the performance will produce the desired outcomes. Conversely, people will tend to express less career interest in domains in which they view the outcomes as negative and they perceive their skills as weak. These authors and others (e.g., Albert & Luzzo, 1999) also recognized that person (e.g., gender, race/ethnicity) and contextual factors (e.g. barriers) might influence the development of specific career interests.

SCCT Choice Model. Social Cognitive Career Theory's Choice Model divides the career choice process into three parts (i.e., expressed career choice, actions, feedback). Lent and colleagues (1994) hypothesized that career interests, which are influenced by dispositions, self-efficacy beliefs and outcome expectations, tend to foster career choices (i.e., intentions to pursue a particular career path). These career choices motivate an individual to take action (e.g., seeking relevant training, applying for certain jobs) to implement her or his career choice. A pattern of successful and failed actions will likely affect a person's self-efficacy beliefs and outcome expectations which will likely affect her or his efforts to implement her or his career choice. Over time, these processes will leave open and make attractive certain choice paths for a given individual while making other options much less appealing. All things being equal, the SCCT Choice Model predicts that individuals will make career choices based on their career interests.

Although the SCCT Choice Model asserts that people will choose careers that are congruent with their career interests, many authors (e.g., Lent et al., 1994; Leong, 1995) have suggested that in real world settings, people might not be free to pursue their primary career interests. The SCCT Choice Model accounts for these situations with contextual affordances (i.e., social or material resources or hardships that help shape an individual’s career development). In the SCCT Choice Model, contextual affordances try to account for the conditions that might affect the direct translation of a person’s career interests into career goals. Contextual affordances are divided into two general types (i.e., distal/background influences and contextual influences) and are generally categorized on when they occur within the choice process (e.g., early development vs. later development).

The first type of contextual affordance includes more distal, background influences (e.g., cultural and gender role socialization, types of available career role models, skill development opportunities) that affect opportunities to develop one's self-efficacy beliefs, outcome expectations, goals and opportunities for successful performance feedback. For example, a Hmong American male high school student might express a high interest and ability in painting. However, after high school, he might not have the financial means to buy paint supplies, making it difficult to have opportunities for successful performances. This initial socialization period steers him away from his dispositional interest in painting to an endeavor that is more likely, such as math. In such instances, personal interests might not be the main influence behind an individual's career choice, which suggests that it might be important to take into account additional variables that influence the choice process.

The second type of contextual affordance involves environmental influences that come into play during the active phases of choice making. Contextual variables such as emotional or financial support for pursuing a particular option, job availability in the individual's preferred field, and socio-structural barriers (e.g., discrimination) might affect people's ability or willingness to translate their interests into goals and their goals into actions. According to SCCT, career interests are more likely to translate into goals (and goals are more likely to be implemented) when people experience strong contextual supports and weak barriers in relation to their preferred career paths. By contrast, non-supportive or hostile conditions can impede the process of transforming interests into goals and goals into actions. In certain cultures, individuals might defer their career decisions to significant others in the family which might force them to pursue a career

path that does not match with their measured career interest pattern. In other words, the relations of interests to goals and of goals to actions are expected to be stronger in the presence of favorable versus restrictive contextual conditions.

SCCT Performance Attainment Model. The SCCT Performance Attainment Model focuses on the performance attainment associated with the persistence of behavioral actions related to career-specific endeavors (Lent et al., 1994). Similar to the Career Interest and Career Choice Models, performance accomplishment outcomes are constructed from the dynamic interaction that occurs among self-efficacy, outcome expectations and personal goals (Lent et al., 1994, 1996, 2000). Unlike previous models, the SCCT Performance Attainment Model also includes a fourth factor, ability. According to Lent and colleagues (1996), ability directly and indirectly influences performance through its effect on self-efficacy beliefs and outcome expectations. Her or his self-efficacy beliefs and outcome expectations in a specific domain affect an individual's level of performance.

According to the SCCT Performance Attainment Model, one’s level of performance depends to some degree on the manner in which one assesses and realizes one's abilities (Lent et al., 1994, 1996, 2000). Lent and colleagues (1994) hypothesized that difficulties generally arise when people do not have the appropriate abilities to accomplish their identified career behaviors or when they misinterpret their self-efficacy beliefs. Similar to the Career Interest and Career Choice Model, person and contextual factors also influence the learning experience of people through the interplay of abilities, self-efficacy, outcome expectations and personal goals.

SCCT Empirical Support

A review of the research literature showed substantial data supporting the connections among interests, self-efficacy, and outcome expectation (Swanson & Gore, 2000). Lent and colleagues (1994) presented effect size estimates between interests and self-efficacy (.53) and outcome expectations (.52). A number of studies have reported similar effect size estimates (Betz, Harmon & Borgen, 1996; Bieschke, Bishop & Garcia, 1996: Fouad & Smith, 1996; Lopez, Lent, Brown & Gore, 1997). Moreover, a meta-analytic investigation has revealed positive and statistically significant relationships among self-efficacy beliefs, academic performance, and performance outcomes (Multon, Brown & Lent, 1991). Studies examining the relation among self-efficacy beliefs and the four experiential sources (i.e., performance accomplishments, vicarious learning, social persuasion and psychological states) have found that performance experiences most significantly influence self-efficacy beliefs.

Swanson and Gore (2000) noted that there is a limited amount of research addressing the role of self-efficacy beliefs in the relations among abilities, interests and performance. Although researchers found a moderate effect size in the relation between abilities and interests, these results diminished when the researchers controlled for the effect of self-efficacy beliefs (Lent et al., 1994). Swanson and Gore (2000) also found that self-efficacy beliefs partially mediated the relation between achievement and performance. On the other hand, some researchers have demonstrated that self-efficacy beliefs might moderate the relation between abilities and performance (e.g., Brown, Lent & Larkin, 1981). These results highlight the important connection of self-efficacy beliefs to performance accomplishments.

Despite the growing research interest and support for various aspects of SCCT, the research examining the influence of person and contextual factors on SCCT variables is comparably minimal. Lent and colleagues (2000) have suggested that examining the influence of perceived barriers on career development might shed light on the contextual hypotheses within SCCT. Moreover, many studies have found career interests to be relatively stable traits (e.g., Betsworth, Bouchard, Cooper, Grotevant, Hansen, Scarr & Weinberg, 1994), therefore, understanding how person and contextual variables can influence the expression of these traits into careers will contribute to our understanding of contextual influences. More recently, career development studies have increasingly investigated SCCT components and the career process of racial and ethnic minorities such as African Americans (e.g., Byars, 1997; Hackett & Byars, 1996), Mexican Americans (e.g., McWhirter, 1997), Asian Americans (e.g., Tang et al., 1999) and women of color (e.g., Byars & Hackett, 1998). Results from these studies highlight how various contextual influences might differentially affect the career choice process of these groups. This study used an SCCT framework to inform the investigation of the contextual factors and individual traits (e.g., person variables and self-efficacy beliefs) in the career development of Hmong American and Caucasian American college students.

Contextual Variables

Contextual variables can be separated into factors that hinder or assist a person in reaching her or his career goal. Contextual factors that may hinder a person from reaching her or his career goal include perceived educational and career barriers. On the other hand, contextual factors that may assist a person in attaining her or his career

aspiration (i.e., support variables) include family support and role model influence. This study focused specifically on these three contextual variables.

Perceived Educational and Career Barriers. Perceived educational and career barriers research emerged with the need to investigate the career development of women (Farmer, 1976, 1985; Fitzgerald & Crites, 1980; Matthews & Tiedman, 1964; O'Leary, 1974; Zytowski, 1969). These authors suggested that career barriers might hinder women from pursuing a specific career option. To investigate why women were pursuing certain careers while avoiding other options, many researchers began by attempting to define the career barrier construct (Crites, 1969; Farmer, 1976, 1985; Nieva & Glutek, 1981; O'Leary, 1974; Sobol, 1963). Some researchers (e.g., Crites, 1969; Farmer, 1976; O'Leary, 1974) described career barriers as "thwarting conditions" that might impede the career process and categorized career barriers as either external or internal. Other researchers (e.g., Nievea & Glutek, 1981; Sobol, 1963) have proposed a more complex classification system of career related barriers. The work of all these researchers to identify and define barriers in the career development of women marked the beginning of perceived educational and career barriers research.

The investigation of the relation between barriers and other aspects of women's career development indicate that women report more career barriers than men report (Albaugh & Nauta, 2005; Luzzo & McWhirter, 2001; Weiss, 2000). Additionally, women with traditional career choices reported more career barriers (e.g., lack of confidence, multiple role conflicts, conflict between children and career demands, and inadequate preparation) than women with nontraditional career choices reported (Kassab, 2000). Specifically, women are more likely to report that their sex, age, and race would be a

career barrier than are men (Swanson & Tokar, 1991b). Other specific career barriers reported more often by women were sex discrimination (McWhirter, 1997; Stead, Els & Fouad, 2004), work-life balance concerns (Luzzo, 1995; Swanson et al., 1996) and financial barriers to education (McWhirter et al., 2007). Finally, women were more likely than men to report more anticipated future career barriers (Luzzo & Hutcheson, 1996). Researchers have extended perceived barriers research from investigating the career development of women to examining the role that perceived educational and career barriers might have on the career development of other traditionally underserved groups such as racial and ethnic minorities (e.g., Ali, McWhirter & Chronister, 2005; Bowman, 1988, Byars-Winston, 2006; Chronister& McWhirter, 2004; Lindley, 2005; Lopez & Ann-Yi, 2006; Luzzo, 1993, 1995, 1996; Luzzo & McWhirter, 2001; McWhirter et al., 2007; Patton et al., 2003; Swanson & Tokar, 1991a, 1991b; Slaney, 1990). These results have advanced our understanding of the impact that structural (e.g., financial barriers) and cultural (e.g., sex, racial discrimination) factors have had on the career development of traditionally underrepresented groups.

Studies that have examined the role of perceived educational and career barriers on the career development of ethnic minority participants have found that perceived barriers were related to their career outcomes (Giankos, 1995, 1996, 1999' Luzzo, 1993; Luzzo & McWhirter, 2001; McWhirter, 1997). In other words, members from disadvantaged groups reported more perceived educational and career barriers; these barriers negatively affected their career decision-making self-efficacy and career decidedness (Swanson & Tokar, 1991a; VilaCruz, 2003; Weiss, 2000). For example, Gushue and colleagues (2006) found that Latino/a students who reported more perceived

career barriers also reported more career indecision. Mexican American students reported more educational barriers than their White counterparts. Additionally, these students reported that these barriers would be more difficult to overcome (McWhirter et al, 2007). Similarly, McWhirter (1997) found that Mexican American students reported more career barriers in their future jobs than did Caucasian American students. Other research results indicate that Black students reported perceiving significantly more career barriers than did White students (Howell et al., 1997; 1984). Additionally, group comparisons showed significant differences for perceived career barriers, with African American women and Hispanic women reporting more barriers than White women reporting (Lopez & Ann-Yi, 2006). Another study found that perceived occupational barriers were predictive of career indecision in a sample of African American students (Constantine et al., 2005). These results indicate that members of disadvantaged groups tend to report more perceived barriers and these perceived barriers tend to affect their career-related outcomes (Howell et al., 1977, 1984; Lopez & Ann-Yi, 2006; Luzzo & McWhirter, 2001; McWhirter et al, 2007). The main objective of this study was to investigate how perceived educational and career barriers affect the career outcomes of a Hmong American college student sample.

Family Support. Family-related variables play an important role in the career development of minority groups (Brown, 2004; Carrero, 2003; Gravino, 2002; Huang, 2001; Lopez, 2002; Orndorff & Herr, 1996; Whiston, 1996). Jackson and Nutini (2002) found that family support was identified as a contextual resource for students' educational development among a sample of culturally diverse middle-school students from low-income families. Another study found that perceived family-related support was related to the career aspiration and school engagement in a sample of inner-city ninth

graders (Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003).). Other investigators have reported that family support, family involvement, family background, or family expectations were related to the educational and career aspiration of high school and college students of color (e.g., Flores & O'Brien, 2002; Tang et al., 1999; Trusty, 2002).

In addition to family support to pursue general educational and career goals, many college students of color face balancing their vocational interests with career options that are acceptable to their family (Fisher & Padmawidjaja, 1999; Tang et al., 1999).). For example, Kassab (2000) found that female participants were more likely to select a traditional career if they perceived low support from significant others. Other researchers (e.g., Lucas, Skokowski, & Ancis, 2000) also have found that a culturally diverse group of female clients reported career decision-making difficulties in the context of strained relationships with their parents. These results indicate that support from the family influences the career development of ethnic minority students. Because some college students of color might possess contradictory career-related goals and values in comparison to their parents, the presence of positive or negative family support for career-related decisions could either facilitate or impede the career decision process of adolescents and young adults of color (Lee & Liu, 2001). Another goal of this study was to investigate the influence of family support on the career development of a Hmong American college student sample.

Role Models. Several career development theories suggest that the absence or presence of role models may influence a person's career development (Almquist & Angrist, 1971; Bandura, 1969, 1977. 1982; Hackett & Betz, 1981; Lent et. al, 1994). Many definitions have been suggested to describe role models. For example, Basow &

Howe (1980, p. 559) defined a role model as “someone whose life and activities influenced the respondent in specific life decisions.” In 1982, the American Psychological Association (p. 150) described a role model as a “real or theoretical person(s) perceived as being ideal standards for emulation in one or a selected number of roles”. Similarly, Pleiss and Feldhusen (1995, p. 163) described a role model as “adults who are worthy of imitation in some area of life”. The most common theme across these definitions is that role models are other persons who influence the admirer in specific areas.

Empirical research has documented the impact of the presence of role models on various career outcomes (e.g., Almquist & Angrist, 1971; Dryler, 1998; Nauta and Kokaly, 2001). Nauta and Kokaly (2001) found that the presence of a role model was significantly positively correlated with career decidedness. More specifically, daughters with employed mothers outside the home had higher career aspirations than daughters whose mothers were not employed outside the home (Almquist & Angrist, 1971). Furthermore, one study also found that children were more likely to choose a career field similar to their parents (Dryler, 1998). These results suggest that the presence of a role model can influence a person's career development.

Researchers have posited that career role models might serve as contextual supports to enhance the likelihood that a person will pursue and achieve a specific career (Almquist & Angrist, 1971). Indeed, researchers found that students who had observed a successful role model in a specific career field were more likely to report a preference for pursuing that career and to believe that they would be successful in that occupation (Scherer, Brodzinski & Wiebe, 1991). Additional studies found that exposure to role

models through video or written materials increased students' likelihood of considering nontraditional careers (Greene, Sullivan, & Beyard-Tyler, 1982; Savenye, 1990). Research has shown that role models have important influence on career choice. Another objective of this study was to investigate the influence of role models on the career process of Hmong American college students.

Dispositional Characteristics

Dispositional characteristics that can influence the career choice process include factors such as sex, race/ethnicity, genetic endowment, personality, career interests, and any other dispositional trait. This study included sex, race/ethnicity, two self-efficacy measures (i.e., career decision-making self-efficacy and coping self-efficacy) and two dispositional measures, affect and optimism. I have discussed sex and race/ethnicity findings throughout the literature review. This section focused on a review of the extant research on the career process, affect and optimism.

Self-efficacy is defined as the belief in one’s ability in a specific domain. According to Bandura (1977, 1982, 1984, 1989), expectations of personal efficacy have critical impact on the initiation and persistence of behaviors. The construct of self-efficacy beliefs has been applied to many areas in psychology, including career development. Betz (1992, 2000, 2004) extended this concept of self-efficacy into career development by proposing that an individual's belief in her or his ability to navigate the career choice process might influence her or his career development (i.e., career decision-making self-efficacy). Furthermore, Luzzo and McWhirter (2001) expanded self-efficacy beliefs into the research on perceived educational and career barriers by developing a survey that would measure an individual's belief in her or his ability to cope with

expected educational and career barriers (i.e., coping self-efficacy). Two self-efficacy variables were included in this study, career decision-making self-efficacy and coping self-efficacy.

Career Decision-making Self-Efficacy. Hackett and Betz (1981) initially suggested that self-efficacy might play a significant role in the career development process; they suggested that self-efficacy expectations might be a cognitive influence on career decision-making and vocational achievement. *Career decision-making self-efficacy* is one's expectations pertaining to her or his ability to perform the targeted tasks and behaviors that are important to effective career decision-making. Low career decision-making self-efficacy expectations might result in avoidance of career decision-making (e.g., career indecision) and low levels of performance (e.g., poor performance). In contrast, high career decision-making self-efficacy expectations might be associated with higher career decision-making (e.g., career decidedness) and successful behavioral performance (Hackett & Betz, 1981; Luzzo, 1993). In other words, an individual's range of career options and persistence in a career plan increase as one's efficacy expectations increase.

Studies examining racial and ethnic differences in career decision-making self-efficacy, have found that racial and ethnic minorities scored lower on career decision-making self-efficacy than did their White counterparts (Gloria & Hird, 1999). Peterson (1993b) also examined racial and ethnic differences in career decision-making self-efficacy and found that African Americans scored significantly lower on a career decision-making self-efficacy measure than other ethnic groups (i.e., Asian Americans, Native Americans, White Americans and Hispanic Americans). Furthermore, Hispanic

American and White American participants scored significantly higher than Asian American and Native Americans. These results indicate that one's social group membership could affect one's level of career decision-making self-efficacy.

Several studies have examined the relations among career decision-making self-efficacy and career-related behaviors (Luzzo, 1993; Taylor & Betz, 1983), behavioral predictors of career and educational adjustment (Taylor & Popma, 1990; Peterson, 1993), the role of ethnicity (Leong, 1991; Luzzo, 1992) and gender (Hackett, Betz, Casas, Rocha-Singh, 1992) in the career development process. Research examining the relation between perceived barriers and career decision-making self-efficacy indicate that perceived barriers are negatively related to career decision-making self-efficacy. Weiss (2000) found that high scores on career decision-making self-efficacy were associated with low less perceived barriers. Luzzo (1996) investigated the relation between perceived occupational barriers and career decision-making self-efficacy in a 188 community college students (women = 129) and found a significant negative relation between the number of future career-related barriers and career decision-making self-efficacy. In other words, more future career-related barriers were related to lower career decision-making self-efficacy. Additionally, Quimby and O'Brien (2004) investigated the relation between perceived career barriers and career decision-making self-efficacy among nontraditional college women. Results indicated that perceived career barriers accounted for a significant portion of the variance in career decision-making self-efficacy in a sample of nontraditional female students with children but not in a sample of nontraditional female students without children.

Studies investigating the relation between perceived barriers and career decision-making self-efficacy among racial and ethnic minorities have found similar patterns. Perceived barriers and career decision-making self-efficacy were significantly negatively related in the South African sample but not the Australian sample (Patton, Creed & Watson, 2003). Choi and colleagues (2007) found significant negative relations between career decision-making self-efficacy and perceived career barriers in a sample of 302 female middle school students in an urban area in South Korea. These results indicate that career decision-making self-efficacy plays an important role in the career outcomes. Furthermore, data indicate that women and ethnic minorities might be more likely to experience educational and career barriers and lower levels of career decision-making self-efficacy than do their male and Caucasian American counterparts. Therefore, career decision-making self-efficacy also might play an important role in the career outcomes of Hmong American college students.

Coping Self-Efficacy. In perceived barriers research, *coping self-efficacy with perceived educational and career barriers* refers to an individual's degree of confidence to overcome a perceived educational or career barrier (Lent et al., 2000). For example, a person might report high levels of confidence in overcoming racial discrimination in the workplace. Hackett and Byars (1996) have noted, "strong efficacy for coping with obstacles and barriers can result in successful performance despite expectations of barriers and impediments such as racism and discrimination" (p. 329). Conversely, a person might be more likely to identify racial discrimination as a career barrier if she or he exhibits a low level of coping self-efficacy for this barrier. For example, if a female student perceives herself as being capable of coping with the negative conditions of

gender discrimination in her engineering career, she might be less likely to define gender discrimination as a career barrier. Because perceived barriers might be confounded with coping self-efficacy, career development researchers have suggested that examinations of the effects of barriers on the career process also should examine the role of coping self-efficacy (Lent et al., 2000).

Researchers have investigated the role of coping self-efficacy in the perceived educational and career barriers literature among various social groups (e.g., Luzzo & McWhirter, 2001). VilaCruz (2003) found a significant negative relation between coping self-efficacy and perceived educational and career barrier perceptions for all students. Because of the low numbers of participants in different racial and ethnic groups, the racial ethnic minority students were combined into one group (19 African American, 18 Latino, 14 multiracial, 15 Asian American, and 3 American Indian, 4 Middle Eastern and 9 who identified as other). A comparison of racial and ethnic minority students with White students (N = 396) found that racial and ethnic minority students reported more perceived educational and career-related barriers and lower levels of coping self-efficacy compared to White students.

Another study by Luzzo and McWhirter (2001) investigated sex and racial minority/majority differences in perceived educational and career-related barriers and level of coping self-efficacy among 168 female and 118 male university students (European Americans = 89%; African Americans = 7%; Native Americans = 2%; Asian Americans = 1%; and Hispanic Americans < 1%). Because of the small number of racial and ethnic minorities, the authors decided to group minority participants together to compare them to White participants. Ethnic minorities reported lower coping self-

efficacy for career-related barriers than did majority individuals. No significant sex differences were found for coping with educational or career-related barriers. Data also have indicated that Black and Latino adolescents who reported more perceived barriers also reported lower levels of coping self-efficacy (Leon and Jackson, 2007). In other words, when coping self-efficacy was high, perceived barriers was low. The authors did not present racial and ethnic group comparisons. These results suggest that coping self-efficacy is related to perceived barriers. Additionally, the relation between coping self-efficacy and perceived barriers might vary depending on minority-majority group membership.

A recent study by Lopez and Ann-Yi (2006) extended the coping self-efficacy research to examine the relations among coping self-efficacy with perceived educational and career barriers, perceived educational and career barriers and career outcomes in a sample of White, Hispanic and African American college women. This study also examined racial and ethnic differences. Career indecision and both coping self-efficacy measures were significantly correlated for all groups. Significant negative correlations were found between perceived educational barriers and coping self-efficacy with educational barriers for Caucasian and Hispanic American women. Only the sample of Hispanic women reported a negative relation between coping self-efficacy with perceived career barriers and perceived career barriers. These results suggest that the relation between coping self-efficacy and perceived barriers might vary depending on racial/ethnic group membership.

Positive and Negative Affect. Research on affect originated in the personality research literature (Clark & Tellegen, 1988) and has expanded into several research areas

including career development (e.g., Fuqua & Hartman, 1983). Clark & Tellegen (1988) proposed two primary orthogonal dimensions of mood. Positive Affect (PA) is the extent to which a person feels enthusiastic, active, energetic, alert and full of concentration. Low PA is characterized by sadness and lethargy. Negative Affect (NA) reflects general distress subsuming "a variety of aversive mood states including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity (p. 1063)."

The majority of research on affect and career development has focused on career indecision and anxiety. Early researchers have suggested a strong relation between anxiety and vocational indecision (e.g., Bordin, 1946; Crites, 1974; Goodstein, 1965). Data support the positive correlation between career indecision and anxiety (e.g., Fuqua & Hartman, 1983; Fuqua, Newman & Seaworth, 1988; Hawkins, Bradley & White, 1977). In other words, undecided students are generally more anxious than decided students. Furthermore, Schmidt (2003) found that students who were enthusiastic, happy and active (i.e., positive affect) reported being more decided about their career than students who were distressed and upset (i.e., negative affect). The goal of this study was to investigate the relation between affect and career indecision in an understudied group, Hmong American college students. Additionally, another goal of this study was to compare the relation between affect and career decision among Hmong American and Caucasian American college students.

Optimism. Optimism refers to a generalized expectation that good things will happen in the future (Scheier & Carver, 1985, 1992, 1993). Several researchers have noted potential benefits of optimism in establishing career plans (Creed et al., 2002;

Lucas & Wanberg, 1995; Marko & Savickas, 1998; Savickas, Silling, & Schwartz, 1984) and later success in leadership roles (Campbell, 1998). Rottinghaus and colleagues (2005) found that optimism was related to positive career outcomes. Data indicate potential benefits of optimism in establishing career plans (Creed, Patton, & Bartrum, 2002; Lucas & Wanberg, 1995; Marko & Savickas, 1998; Savickas, Silling, & Schwartz, 1984). Furthermore, Carver and Scheier (2001) theorized that pessimistic individuals might be more likely to disengage effort while continuing commitment toward a goal. Another objective of this study was to investigate the effects of optimism and pessimism on career outcomes for Hmong American college students.

Outcome Variable

An outcome variable is a measurable factor that occurs because of another variable. In other words, career development outcome variables usually change when the associated proposed variable changes. Examples of career development outcome variables have included career decidedness (e.g., Patton et al., 2003). This study focused specifically on career decidedness. Career decidedness is introduced and relevant empirical data are provided.

Career Decidedness. Career decidedness is defined as a developmental phase through which individuals might pass on their way to reaching a career decision (Lopez & Andrews, 1987). In other words, career decidedness is described as a temporary state that is normal in human development. Research findings indicate a significant negative relation between career decidedness and perceived barriers (Patton et al., 2003; Weiss, 2000). Researchers also have found this significant negative relation among African American adolescents (Constantine et al., 2005), Latino high school students (Gushue et

al., 2006) and a group of racially diverse urban adolescents (Choi et al., 2007). Current research indicates a significant negative relation between career decidedness and perceived barriers in general. Results also suggest that disadvantaged groups such as racial and ethnic minorities report more perceived barriers and therefore, less career decidedness. Examining how career decidedness relates to perceived barriers in Hmong American college students, a specific disadvantaged ethnic group, might increase our understanding of this career development process for this specific group.

Major Commitment. Research on the general commitment construct (e.g., Griffin & Batemen, 1986; Mathieu & Zajac, 1990; Meyer & Allen, 1991; Morrow, 1983; Mowday, Steers, & Porter, 1982; Reichers, 1985) has suggested that commitment is a rather complex and multifaceted construct. Meyer and Allen (1991) described three forms of commitment: affective, continuance and normative. They hypothesized that individuals with strong *affective commitment* remain because they want to; whereas, individuals with a strong *normative commitment* remain because they feel an obligation to remain. Individuals with a strong *continuance commitment* stay because they recognize the high costs associated with leaving. In sum, commitment may vary according to *affective* (I like it), *normative* (I should), and/or *continuance* (I must) commitment. Meyer and Allen (1991) and Meyer, Allen and Smith (1993) suggested that different variables (e.g., side bets, job tenure) can affect each commitment dimension differently. In other words, individuals can vary on all three dimensions of commitment. Because few studies have examined how person factors and contextual variables might influence the three components of commitment, this study investigated how person and contextual variables relate to Hmong American college students commitment to their academic major.

Career Decision Making Self Efficacy & Career Decidedness

In addition to the perceived barriers research, the relation between career decision-making self-efficacy and career decidedness also has been studied. Results indicate that participants who reported high levels of career decision-making self-efficacy also significantly reported more career decidedness. In other words, individuals who indicated more confidence in their ability to accomplish decision-making tasks were more likely to be career decided than those indicating low levels of confidence. Subsequent research has supported the positive relation between career decision-making self-efficacy and career decidedness (Betz & Voyten, 1997; Choi, Kim & Kim, 2007; Hill, 1997; Niles & Sowa, 1992; Taylor & Popma, 1990; Weiss, 2000). Taylor and Popma (1990) found that career decision-making self-efficacy significantly differed between students who had declared a major, students who were tentative about their major choice, and students who were undecided about their major. In other words, students who had declared a major scored significantly higher on career decision-making self-efficacy than the other two groups. Gloria and Hird (1999) also found that students with declared majors scored higher on career decision-making self-efficacy than students with undeclared majors. These results support a positive relation between career decision-making self-efficacy and career decidedness.

The research on the relation among career decision-making self-efficacy and career decidedness has expanded to include various social groups. Researchers found that women who were undecided regarding their occupational choice reported significantly lower levels of career decision-making self-efficacy than women who were decided (Mathieu, Sowa & Niles, 1993). Between groups research has found that the negative

relation between career decision-making self-efficacy and career indecision was stronger for women than for men (e.g., Betz et al., 1996; VilaCruz, 2003). Additionally, students with disabilities reported lower levels of career decision-making self-efficacy than their non-disabled counterparts (Hitchings, Luzzo, Retish, Ristow & Horvath, 1998; Luzzo, Hitchings, Retish & Shoemaker, 1999). Giankos (1996) and Luzzo (1999) found that non-traditional college students (i.e., undergraduate students over the age of 25) reported higher levels of career decision-making self-efficacy than did traditional college students (i.e., undergraduate students under the age of 25). These findings suggest that the relation between career decision-making self-efficacy and career decidedness might differ depending on the social group under study.

Disadvantaged Groups

Most studies investigating the career development of people of color generally have combined all racial/ethnic groups (e.g., Luzzo & McWhirter, 2001) or have used racial categories to combine specific ethnic groups (e.g., Tang et al, 1999). Although disadvantaged groups often share similar experiences (i.e., discrimination), many of these groups also differ on important factors such as immigration and educational attainment history. Generalizing over disadvantaged groups might inappropriately equate groups, affecting the external validity of the research. If disadvantaged groups differ, it is not appropriate to generalize results to all *disadvantaged group research* to all disadvantaged groups. An example of this method is to combine all racial groups into a "racial/ethnic minority" group. Similarly, if a racial category combines diverse ethnic groups, it is not appropriate to generalize research to all members of that racial category. An example of this method is to combine Japanese Americans with Hmong Americans subsumed under

the racial category of “Asian American”. Because a larger percentage of Japanese Americans have immigrant status, and therefore, were more likely to have immigrated to the U.S. under relatively more positive circumstances (e.g., higher educational achievement, ability to speak English, relocation because of job opportunities), it may not be appropriate to group them with Hmong Americans, who tend to have a refugee status, and were more likely to have immigrated to the U.S. under relatively less positive circumstances (e.g., lower educational achievement, lack of English speaking ability, lack of job-related skills). Another contribution of this study is that it explicitly investigated contextual variables, person characteristics, self-efficacy beliefs and career outcomes in the context of a single Asian American ethnic group, Hmong American college students.

Hmong Americans. Most Hmong American college students are children of Hmong Americans, war refugees who arrived in the United States with few pre- and post-immigration resources (e.g., family history of educational achievement, financial resources) typically associated with success in the highly structured and competitive educational and vocational system in the United States (Swartz, Lee & Mortimer, 2003). A large portion of Hmong American refugees were agrarian, and therefore, less likely to be formally schooled. However, despite these challenges, Vang (2001) found that approximately 6,500 Hmong Americans were enrolled in undergraduate colleges and universities. Additionally, these results indicated that Hmong Americans college students had received 126 doctoral or other professional degrees, over 350 Master of Arts and Science degrees and over 3,500 Bachelor of Arts and Sciences degrees. Furthermore, Pfeifer (2001) estimated that more than half of the 169,000 Hmong Americans who were residing in the United States were less than 18 years old. Because of the Hmong

Americans unique situation (e.g., few pre-/post-immigration resources, immigration history), it is reasonable to argue that contextual factors and dispositional characteristics might influence their career development process differently. In other words, the lack of research on the career development of Hmong American college students makes it difficult to understand and identify the relevant contextual (e.g., perception of barriers) and person variables (e.g., affect, optimism) that might be influencing their career choice process. Additionally, because of the large proportion of Hmong Americans coming into college age in the next generation, there is a realized need to study the career development of Hmong Americans, to identify barriers that have hindered and strategies that have assisted Hmong Americans in career attainment (Lee, 2007). In sum, little is known about how contextual factors and dispositional characteristics might affect the career choices of Hmong American college students.

Statement of the Problem

Women and racial/ethnic minority students generally report significantly more perceived educational and career barriers, and lower levels of coping self-efficacy, career decision-making self-efficacy, family support, role model influence and career decidedness than do male and Caucasian American college students (e.g., Lopez and Ann-Yi, 2006; Luzzo, 1993; Weiss, 2000). Furthermore, these differences appear to affect the career development and success of minority students. Because the current career research on racial and ethnic minority groups tends to investigate the career development of racial and ethnic groups with more history in the United States, little is known about the career development of more recent refugee immigrant groups such as Hmong Americans. No previous research has investigated specific contextual factors and dispositional characteristics in the career development of Hmong American college students. Therefore, this study was conducted to reduce this gap in the career development research.

Few studies have empirically examined the relation among contextual factors and dispositional characteristics in the career development of college students of color, generally, and within specific racial/ethnic groups, in particular (Brown, 2004). Research findings suggest that contextual factors and dispositional characteristics might affect the career development of specific groups differently (e.g., Choi et al., 1997; Fouad, Kantamneni, Smothers, Chen, Fitzpatrick, & Terry, 2008; Lopez & Ann-Yi, 2006; Tang et al., 1996). This study investigated how perceived educational and career barriers, family support, role models (i.e., contextual factors), career decision-making self-efficacy, coping self-efficacy, optimism, and affect (i.e., person variables) related to

career decidedness (i.e., career outcomes) in an understudied recent refugee immigrant group, Hmong American college students. Results were compared to a Caucasian American college student sample to investigate group differences.

Significance of the Study

This study contributes to the career development research field by providing a more theoretically integrative and inclusive approach to investigating the career process. First, investigating the influences of contextual factors and dispositional characteristics on the career development process allows the inclusion of potential factors that might affect Hmong American college students' career development. Because Hmong American college students differ in their immigration history, generation status, academic and economic achievement, compared to other Asian American ethnic groups, practitioners might find it useful to know how these differences might manifest in the career development of Hmong American college students.

Summary and Restatement of Objective of this Study

Social Cognitive Career Theory (SCCT) was used as a framework for this study because it employs an interactive model between contextual factors and dispositional characteristics in the career development process. Current research data indicate that contextual factors do affect career development outcomes. Specifically, individuals who report more barriers, less family support and less role model support report lower levels of career outcomes (e.g., career decidedness). Self-efficacy beliefs also appear to influence career choice. Results indicate that higher levels of career decision-making self-efficacy and coping self-efficacy correlate with higher levels of career decidedness. The extant research on dispositional characteristics (e.g., affect and optimism) suggests a

positive relation between positive affect and career decidedness, and optimism and career decidedness. Furthermore, the relations among these variables appear to be affected by the social group that is under study. The objective of this study is to investigate the factors that can affect the career development of Hmong American college students. Specifically, this study investigated the relations among perceived educational and career barriers, family support, role model support, role model inspiration, career decision-making self-efficacy, coping self-efficacy with educational and career barriers, positive and negative affect and optimism/pessimism and their effects on career decidedness and major commitment in a Hmong American college student sample. Results also were compared with a Caucasian American college student sample to investigate group differences.

Research Objectives

No study has empirically investigated the relation between contextual factors, person variables and self-efficacy beliefs in the career development of one specific Asian American ethnic group such as Hmong American college students (Brown, 2004). Despite recognition that Asian American ethnic groups are a heterogeneous group, comprised of many distinct ethnic and cultural groups with different immigration histories (i.e., reasons for immigration, immigrant or refugee status, previous trauma prior to arrival in U.S.) and varying levels of adjustment to American culture (i.e., length of stay in U.S., educational attainment, socioeconomic status) (Huang, 1991; Leong, 1995; Nakano, 1990; Trask, 1993), most psychological research continues to combine Asian American ethnic groups into one racial category. Because Hmong Americans have a unique immigration history (e.g., recent immigration, refugee status, few pre-immigration

resources), their experience of the career development process might be different from other Asian American ethnic groups. Moreover, the findings from these other Asian American ethnic groups might not apply to the career development of Hmong American college students. In addition to the specific group analysis, the moderating role of coping self-efficacy between perceived barriers and career-related choice has not been investigated despite being suggested by Lent et al., (2000) and other researchers (McWhirter et al., 1998; Swanson & Gore, 2000). This study fulfilled these two broad objectives.

Research Hypotheses

The primary purpose of the present study was to examine sex and race/ethnic comparisons among Hmong American and Caucasian American college students in regards to perceived educational and career barriers, coping self-efficacy with perceived educational and career barriers, family support, role model support and inspiration, career decision-making self-efficacy, affect, optimism, and career decidedness. This study also investigated the moderator role of coping self-efficacy with perceived educational and career barriers on the relation between perceived educational and career barriers and career decidedness.

Research has found a significant negative relation between perceived educational and career barriers and coping self-efficacy with perceived educational and career barriers among math and science students (Lent et al., 2001). Other researchers (VilaCruz, 2003; Leon & Jackson, 2007; McWhirter. 1997) have found a similar relation between perceived educational and career barriers and coping self-efficacy with perceived educational and career barriers among racial and ethnic minority students. For

example, Leon and Jackson (2007) found that Black and Latino adolescents who reported more perceived educational and career barriers also reported lower coping self-efficacy with perceived educational and career barriers.

Hypothesis 1.

- ***a. A significant negative relation between perceived career barriers and coping self-efficacy with perceived career barriers will be found among all college students.***
- ***b. A significant negative relation between perceived educational barriers and coping self-efficacy with educational barriers will be found among all college students.***

Research results suggest that individuals who report more perceived barriers report lower levels of career decision-making self-efficacy. The significant negative relation between career decision-making self-efficacy and perceived barriers has been found with undergraduate students (e.g., Weiss, 2000), nontraditional female college students (Quimby & O'Brien, 2004) and for students in other countries (Choi et al., 2007; Patton, Creed & Watson, 2003). Furthermore, this significant negative relation has been found for perceived educational barriers and career decision-making self-efficacy (Lent et al., 2000) and perceived career barriers and career decision-making self-efficacy (Lopez & Ann-Yi, 2006).

Hypothesis 2.

- ***a. A significant negative relation between perceived career barriers and career decision-making self-efficacy will be found among all college students.***

b. ***A significant negative relation between perceived educational barriers and career decision-making self-efficacy and will be found among all college students.***

Results on the relation between career decision-making self-efficacy and coping self-efficacy indicate a significant positive relation. Lopez and Ann-Yi (2006) found a significant positive relation between these career decision-making self-efficacy and both coping self-efficacy measures (i.e., educational and career) among a group of Caucasian American, African American and Hispanic American female college students.

Hypothesis 3.

a. ***A significant positive relation between career decision-making self-efficacy and coping self-efficacy with perceived career barriers will be found among all college students.***

b. ***A significant positive relation between career decision-making self-efficacy and coping self-efficacy with educational barriers will be found among all college students.***

Research has found that individuals who indicated more confidence in their ability to accomplish career decision-making tasks were more likely to be decided in their college major than those who indicated low levels of confidence (Creed et al., 2004; Mathieu et al., 1983; Taylor & Betz, 1983; Taylor & Popma, 1990; Weiss, 2000). Taylor and Betz (1983) examined the relation between career decision-making self-efficacy and career indecision among college students and found that students who reported higher levels of career decision-making self-efficacy were significantly less likely to report career indecision. Additionally, students who reported a declared college major had higher

levels of career decision-making self-efficacy than students who reported an undeclared college major (Taylor & Popma, 1990). Similarly, Mathieu and colleagues (1993) found that, among female students, those who were undecided about their occupational choice reported significantly lower levels of career decision-making self-efficacy than their decided counterparts. Creed and colleagues (2004) also found that career decision-making self-efficacy was a significant predictor of career indecision in male students.

Hypothesis 4.

a. A significant positive relation between career decision-making self-efficacy and career decidedness will be found among all college students.

Several studies have found a negative correlation between career decidedness and anxiety (e.g., Fuqua, Newman & Seaworth, 1988; Hawkins, Bradley & White, 1977). These studies have found that undecided students are generally more anxious than decided students. Furthermore, Schmidt (2003) found that students who were enthusiastic, happy and active (i.e., positive affect) reported being more decided about their career than students who were distressed and upset (i.e., negative affect).

Hypothesis 5.

a. A significant positive relation between positive affect and career decidedness will be found among all college students.

b. A significant negative relation between negative affect and career decidedness will be found among all college students.

Some researchers have proposed that optimism and pessimism might be related to an individual's career development. For example, Carver and Scheier (2001) suggested that pessimistic individuals might be more likely to disengage effort while continuing

commitment toward a career goal. Some studies (e.g., Rottinghaus, Day & Borgen, 2005) have found that optimism is related to positive career outcomes

Hypothesis 6.

- ***a. A significant positive relation between optimism and career decidedness will be found among all college students.***
- ***b. A significant negative relation between pessimism and career decidedness will be found among all college students.***

Very few studies have documented sex differences in perceived barriers, self-efficacy, career decision-making self-efficacy and career decidedness for specific racial/ethnic groups. The research examining sex differences in perceived barriers, coping self-efficacy, career decision-making self-efficacy and career indecision generally show significant differences between men and women. Research about the academic achievements of male and female Hmong American college students does suggest that some differences in experiences exist. For example, Swartz and colleagues (2003) noted that more Hmong American women are attending college compared to Hmong American men. However, some researchers note that Asian American women are still socialized into unequal roles in their communities (Che, 1979; Lu, 1993). Given the unequivocal findings, significant sex-differences within the Hmong American college student sample were proposed but no direction was specified.

Hypothesis 7.

- ***a. A significant gender difference will be found for perceived career barriers among Hmong college students.***

b. A significant gender difference will be found for perceived career barriers among Hmong college students.

c. A significant gender difference will be found for career decision-making self-efficacy among Hmong college students.

d. A significant gender difference will be found for coping self-efficacy with career barriers among Hmong college students.

e. A significant gender difference will be found for coping self-efficacy with educational barriers among Hmong college students.

f. A significant gender difference will be found for career decidedness among Hmong college students.

g. A significant gender difference will be found for family support among Hmong college students.

h. A significant gender difference will be found for role model support/guidance among Hmong college students.

i. A significant gender difference will be found for role model inspiration/modeling for Hmong college students.

Researchers have found that Caucasian women report more perceived career barriers, less career decision-making self-efficacy, less coping self-efficacy, less career decidedness, family support and role models than Caucasian men report (e.g., Luzzo, 1993; Luzzo & Hutcheson, 1996; Luzzo & McWhirter, 2001; Weiss, 2000). This study seeks to investigate these relations.

Hypothesis 8.

- ***a. Caucasian female college students will report more perceived career barriers than Caucasian male college students.***
- ***b. Caucasian female college students will report more perceived educational barriers than Caucasian male college students.***
- ***c. Caucasian female college students will report less career decision-making self-efficacy than Caucasian male college students.***
- ***d. Caucasian female college students will report less coping self-efficacy with career barriers than Caucasian male college students.***
- ***e. Caucasian female college students will report less coping self-efficacy with educational barriers than Caucasian male college students.***
- ***f. Caucasian female college students will report less career decidedness than Caucasian male college students.***
- ***g. Caucasian female college students will report less family support than Caucasian male college students.***
- ***h. Caucasian female college students will report less role model support/guidance than Caucasian male college students.***
- ***i. Caucasian female college students will report less role model inspiration/modeling than Caucasian male college students.***

No research has investigated perceived barriers, coping self-efficacy, career decision-making self-efficacy and career decidedness among Hmong college students. The extant research with other ethnic groups generally shows significant ethnic

differences with ethnic minority students reporting more perceived educational and career barriers, less career decision-making self-efficacy, less coping self-efficacy, less career decidedness, less family support and role model support than do Caucasian college students (e.g., Lopez & Ann-Yi, 2006; Luzzo & McWhirter, 2001; Weiss, 2000).

Hypothesis 9.

- ***a. Hmong college students will report more perceived career barriers than Caucasian college students.***
- ***b. Hmong college students will report more perceived educational barriers than Caucasian college students.***
- ***c. Hmong college students will report less career decision-making self-efficacy than Caucasian college students.***
- ***d. Hmong college students will report less coping self-efficacy with career barriers than Caucasian college students.***
- ***e. Hmong college students will report less coping self-efficacy with educational barriers than Caucasian college students.***
- ***f. Hmong college students will report less career decidedness than Caucasian college students.***
- ***g. Hmong college students will report less family support than Caucasian college students.***
- ***h. Hmong college students will report less role model support/guidance than Caucasian college students.***
- ***i. Hmong college students will report less role model inspiration/modeling than Caucasian college students.***

Hypothesis 10.

a. ***Female college students will report more perceived career barriers than male college students.***
b. ***Female college students will report more perceived educational barriers than male college students.***
c. ***Female college students will report less career decision-making self-efficacy than male college students.***
d. ***Female college students will report less coping self-efficacy with career barriers than male college students.***
e. ***Female college students will report less coping self-efficacy with educational barriers than male college students.***
f. ***Female college students will report less career decidedness than male college students.***
g. ***Female college students will report less family support than male college students.***
h. ***Female college students will report less role model support/guidance than male college students.***
i. ***Female college students will report less role model inspiration/modeling than male college students.***

Although research generally has found that individuals who reported more perceived educational and career barriers also reported more career indecision, some inconsistencies do exist in the literature. Researchers (Lent et al., 2000; Swanson & Tokar, 1991) have suggested that other variables might moderate the relation between

these two variables. Lent and colleagues (2000) have suggested that coping self-efficacy might moderate the relation between perceived barriers and career decidedness. In other words, a person might report more perceived barriers but also might report higher levels of coping self-efficacy, which, in turn, might not affect her or his career decidedness.

Hypothesis 11.

a. Coping self-efficacy with perceived educational barriers is predicted to moderate the relation between perceived educational barriers and career decidedness for all college students.

b. Coping self-efficacy with perceived career barriers is predicted to moderate the relation between perceived career barriers and career decidedness for all college students.

Because several questions emerged from the results of the original hypotheses, additional hypotheses were explored.

Hypothesis 12.

a. Examine the incremental and collective contributions of hypothesized key predictors [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Family support (FAM), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Coping self-efficacy with perceived Career Barriers (CC), Coping self-efficacy with perceived Educational Barriers (EC)] of Career Decidedness (CD) and Career Decision-making Self-Efficacy (CDSE) among the four groups (e.g., Hmong American male college students, Hmong American female college students, Caucasian

American male college students, Caucasian American female college students).

Hypothesis 13.

a. ***Positive Affect (PA) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for all college students.***
b. ***Positive Affect (PA) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD) for all college students.***

Hypothesis 14.

a. ***Negative Affect (NA) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for all college students.***
b. ***Negative Affect (NA) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD) for all college students.***

Hypothesis 15.

a. ***Optimism (OPT) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for all college students.***
b. ***Optimism (OPT) would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for all college students.***

Hypothesis 16.

a. Pessimism (PESS) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for all college students.

b. Pessimism (PESS) would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for all college students.

CHAPTER 2

Method

Participants

Three hundred-eighty undergraduates (243 women) at a large Midwestern university participated in this study. The sample was 48% Hmong American (105 women) and 52% Caucasian American (138 women). Participants ranged in age from 17 to 35 years with an average age of 19.90 years (SD = 1.64). Class representation included all year levels, although the sample predominantly consisted of underclassmen (first year: *n* = 144, 37.9%; sophomore: *n* = 109, 28.7%; junior: *n* = 53, 13.9%; senior: *n* = 30, 7.9%, other: *n* = 31; 8.2%). Refer to Tables 1-8 for specific demographic characteristics for race/ethnic and sex groups; Chapter 3 reports the demographic data for the participants in detail.

Recruitment and Compensation for Participation

Participants were recruited through the University psychology course extra-credit program and through Hmong Student organizations and classes. Students recruited through the extra-credit program received extra-credit points for their participation. For students recruited from Hmong Student organizations and classes, five dollars was donated for each participant to the organizations.

Table 1.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Mean Age and Mean GPA[+] of Hmong American and Caucasian American College Students

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
Age M (SD)	20.44 (1.83)	20.10 (1.83)	19.90 (2.54)	19.78 (2.42)
GPA M (SD) [Range]	2.72 (.49) [1.8-4.5]	2.95 (.47) [1.8-4.5]	3.29 (.47) [2.0-4.5]	3.31 (.41) [2.1-4.5]

+ GPA = Grade Point Average

Table 2.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by Year in College

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
FRESH	15	35	27	67
SOPH	38	36	17	18
JUNIOR	15	14	5	19
SENIOR	5	14	1	10
SENIOR +	4	4	0	5
NON DEGREE	0	2	3	3

FRESH = freshman (1 year), SOPH = sophomore (2 years), JUNIOR = junior (3 years), SENIOR = senior (4 years), SENIOR + = 5 years, NON-DEGREE = non-degree students

Table 3.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by First in Family to Attend College

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
Yes	25	24	6	13
No	52	81	53	125

Table 4.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by Family Generation Status in the United States of America

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
INT	0	0	0	3
REF	9	14	0	1
IMM	22	25	2	0
US	43	66	0	0
1 PARENT	0	0	3	3
BOTH	1	0	18	48
GP	0	0	20	45
GGP	0	0	17	38

INT = international student, REF = refugee, IMM = immigrant, US = Born in the US, both parents were not, 1 PARENT = One parent and I born in US, BOTH = Both parents and I born in the US, GP = Grandparents, parents and I were born in the US, GGP = Great-grandparents, grandparents, parents and I were born in the US.

Table 5.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by Reported Family Social Status

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
POOR	16	23	0	0
WORKING	35	41	3	10
MIDDLE	25	40	29	64
UP-MID	1	1	25	56
UPPER	0	0	3	8

POOR = working poor class , WORKING = working class, MIDDLE = middle class, UP-MID = upper middle class, UPPER = upper class

Table 6.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by Reported Annual Family Income

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
19K or less	25	38	0	4
20K-39K	21	21	5	8
40-59K	13	21	4	14
60-79K	13	11	14	34
80-149K	4	9	21	51
150K or more	0	2	16	27

Table 7.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by FATHER'S Highest Education Level Completed

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
NONE	13	17	0	0
ELEM	8	8	0	0
JUNIOR	2	3	0	0
SOME HS	4	12	1	1
DIPLOMA	7	13	9	15
VO-TECH	21	35	16	34
FOUR YR	6	4	23	60
MASTER	2	1	6	15
DOCTOR	0	2	5	13

NONE = no school , ELEM = elementary school , JUNIOR = junior high school/ middle school, SOME HS = some high school, DIPLOMA = completed high school, VO-TECH = some college/vocational-technical school, FOUR YR = 4 year college graduate, MASTER = master's degree, DOCTOR = doctoral level graduate/medical/law degree

Table 8.
Demographic Characteristics: Sex and Race/Ethnic Comparisons for Number of Hmong American and Caucasian American College Students Separated by MOTHER'S Highest Education Level Completed

	Hmong		White	
	Men (n =77)	Women (n = 105)	Men (n = 60)	Women (n = 138)
NONE	26	30	0	0
ELEM	10	20	0	0
JUNIOR	3	4	0	0
SOME HS	4	11	0	2
DIPLOMA	11	16	10	22
VO-TECH	7	7	20	40
FOUR YR	1	2	23	50
MASTER	1	2	7	20
DOCTOR	0	1	0	4

NONE = no school , ELEM = elementary school , JUNIOR = junior high school/ middle school, SOME HS = some high school, DIPLOMA = completed high school, VO-TECH = some college/vocational-technical school, FOUR YR = 4 year college graduate, MASTER = master's degree, DOCTOR = doctoral level graduate/medical/law degree

Administration of Measures

Students were administered the measures online. Personal information (i.e., student identification numbers) was collected for extra-credit participants, but was removed from the dataset after compensation was awarded. The survey was administered via a secure computer server, and transmissions were encoded via a 128-bit encryption algorithm to ensure that third parties could not intercept responses. This is the same level of encryption commonly used to transmit other sensitive information (e.g., credit card numbers, social security numbers, medical records, etc.) over the internet.

Measures

In addition to demographic variables, measured variables included perceived educational and career barriers, family support, role model support and inspiration, coping self-efficacy with educational barriers, coping self-efficacy with career barriers, career decision-making self-efficacy, positive and negative affect, optimism and pessimism, career decidedness and college major commitment. Perceived Career Barriers (CB) and perceived Education Barriers (EB) were assessed using the Perception of Barriers-Revised (POB-R: Luzzo & McWhirter, 2001). The Career Support Scale (CSS: Binen et al., 1995) was used to measure family support (FAM). Role model support/guidance (S/G) and inspiration/modeling (I/M) were measured by the Influence of Others on Academic and Career Decision Scale (IOACDS: Nauta & Kokaly, 2001). Coping Self-Efficacy with Perceived Career Barriers (CB) and Coping Self-Efficacy with Perceived Education Barriers (EB) were measured using the Coping with Barriers scale (CWB: Luzzo & McWhirter, 2001). Career Decision-making Self-Efficacy (CDSE) was measured by Career Decision Self-Efficacy-Short Form (CDSE-SF: Betz et al., 1996).

Positive Affect (PA) and Negative Affect (NA) were measured using the Positive and Negative Affect Scale (PANAS: Watson et al., 1988). Optimism (OPT) and Pessimism (PESS) were measured utilizing the Life Orientation Test-Revised (LOT-R: Scheier, Carver, & Bridges, 1994). Career Decidedness (CD) was measured by the Career Decision Profile (CDP: Jones, 1988, 1989a, 1989b). Lastly, college major commitment was measured by a revised version of Three Component Model for Occupational Commitment (Meyer et al., 1993). The three components of college major commitment were Affective commitment (AFF), Continuance commitment (CONT) and Normative commitment (NORM). This measure was revised for college major commitment (Chang & Hansen, 2007).

Cronbach's alphas for all measures based on the total sample and for each racial/ethnic group in this study are reported in Table 9. Tables 14-17 present Cronbach's alphas for all measures based on each sex and racial/ethnic group (e.g. Hmong American female college students, Hmong American male college students, Caucasian American female college students, Caucasian American male college students). Means and standard deviations for all measures based on each sex and racial/ethnic group are presented in Table 10.

Demographic Measure. The demographic questionnaire gathered information on age, sex, race, ethnicity, immigrant status, first generation college student status, year in college, college major, cumulative grade point average, family socioeconomic status, family annual income, parent occupations and parents' completed educational level.

Perception of Barriers-Revised (POB-R: Luzzo & McWhirter, 2001). Most studies examining perceived barriers utilize a version of the POB (e.g., Constantine et al.,

2005; Kenny et al., 2003: Leon & Jackson, 2007; Lindley, 2005; Lopez & Ann-Yi, 2006). The POB-R scale (Luzzo & McWhirter, 2001) consists of 32 items and 2 subscales: a) perceived Career Barriers (CB) (e.g., “In my future career, I will probably be treated differently because of my sex.”) and b) perceived Educational Barriers (EB) (e.g., “Money problems are currently a barrier to my educational aspirations.”). The POB-R scale uses a Likert-type response scale format ranging from 5 (strongly agree) to 1 (strongly disagree) with higher scores indicating perception of more barriers. Luzzo and McWhirter (2001) reported Cronbach's alphas of .86 (CB) and .88 (EB) for scores on the two POB subscales. Lopez and Ann-Yi (2007) reported Cronbach’s alphas of .87 (CB) and .86 (EB). Cronbach’s alphas of .91 (CB) and .93 (EB) were found for this study.

Table 9.
Cronbach's Alphas for All Measures Based on Total Sample and Each Racial/Ethnic Group

	Total (N = 380)	Hmong (n = 182)	Caucasian (n = 198)
POB-R			
CB	.91	.91	.88
EB	.93	.91	.88
CWB			
EC	.94	.93	.93
CC	.94	.93	.93
IOACDS			
S/G	.90	.85	.92
I/M	.85	.80	.88
CSS			
FAM	.88	.80	.89
TCMOC			
AFF	.86	.85	.87
CONT	.86	.77	.89
NORM	.83	.79	.82
LOT-R			
OPT	.67	.67	.67
PESS	.75	.53	.82
CDSE-SF			
CDSE	.95	.96	.92
PANAS			
PA	.89	.91	.87
NA	.87	.85	.88
CDP			
CD	.79	.84	.74

POB-R = Perception of Barriers-Revised Scale; CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CWB = Coping with Barriers Scale, EC = Coping Self-Efficacy with Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers , IOACDS = Influence of Others on Academic and Career Decision Scale, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, CSS = Career Support Scale, FAM = Family Support, TCMOC = Three Component Model for Occupational Commitment Scale, AFF = Affective Commitment, CONT = Continuance Commitment, NORM = Normative Commitment, LOT-R = Life Orientation Test-Revised Scale, OPT = Optimism, PESS = Pessimism, CDSE-SF = Career Decision Self-Efficacy-Short Form Scale, CDSE = Career Decision-Making Self-Efficacy, PANAS = Positive and Negative Affect Scale, PA = Positive Affect, NA = Negative Affect, CDP = Career Decision Profile Scale, CD = Career Decidedness

Table 10.
Means and Standard Deviations for All Measures Based on Each Sex and Racial/Ethnic Group

		Hmong Women (n = 105)		Hmong Men (n = 77)		Caucasian Women (n= 138)		Caucasian Men (n = 60)	
		M	SD	M	SD	M	SD	M	SD
1	CB	3.08	.74	2.79	.85	2.18	.72	1.64	.54
2	EB	2.67	.67	2.55	.68	1.91	.52	1.71	.43
3	EC	3.70	.67	3.71	.69	4.02	.63	4.32	.47
4	CC	3.70	.74	3.53	.96	3.98	.79	4.31	.86
5	S/G	3.75	.77	3.50	.73	4.19	.79	4.13	.76
6	I/M	3.26	.79	3.03	.69	3.43	.87	3.47	.87
7	FAM	3.39	.73	3.36	.60	4.12	.75	4.25	.49
8	AFF	5.30	.99	5.18	1.06	5.68	.95	5.59	1.12
9	CONT	4.16	1.36	4.45	.94	3.88	1.66	3.58	1.70
10	NORM	4.19	1.12	4.46	.99	3.47	1.16	2.99	1.08
11	OPT	3.66	.64	3.72	.74	3.46	.74	3.71	.61
12	PESS	2.92	.65	3.03	.68	2.62	.86	2.52	.66
13	CDSE	3.44	.65	3.54	.62	3.85	.48	4.06	.48
14	PA	3.21	.82	3.41	.75	3.32	.64	3.52	.71
15	NA	2.62	.78	2.64	.74	2.27	.75	2.06	.61
16	CD	5.36	1.25	5.21	1.44	5.64	1.18	5.73	1.00

1. CB = Perceived Career Barriers, **2**. EB = Perceived Educational Barriers, **3.** EC = Coping Self-Efficacy with Perceived Educational Barriers, **4.** CC = Coping Self-Efficacy with Perceived Career Barriers, **5.** S/G = Role Model Support/Guidance, **6.** I/M = Role Model Inspiration/Modeling, **7.** FAM = Family Support, **8.** AFF = Affective Commitment, **9.** CONT = Continuance Commitment, **10.** NORM = Normative Commitment, **11.** OPT = Optimism, **12.** PESS = Pessimism, **13.** CDSE = Career Decision-Making Self-Efficacy, **14.** PA = Positive Affect, **15.** NA = Negative Affect, **16.** CD = Career Decidedness

Career Support Scale (CSS: Binen et al., 1995; Flores and O' Brien, 2002; Constantine et al., 2005). The adapted and shortened version of the CSS (Binen et al., 1995; Constantine et al., 2005; Flores and O'Brien, 2002) assesses career support provided by both parents concomitantly and includes 10 items. Respondents endorse each item using a 5-point (1 = *almost never* to 5 = *almost always*) Likert-type scale. Higher scores on the CSS are associated with greater levels of perceived parental support. Sample items from the modified version of the CSS include, "My parents agree with my career goals" and "My parents and I often discuss my career plans." Researchers reported an internal consistency coefficient of .76 (Flores & O'Brien, 2002) and .78 (Constantine et al., 2005). Cronbach's alpha of .88 was found for this study.

Influence of Others on Academic and Career Decision Scale (IOACDS: Nauta & Kokaly, 2001). The IOACDS is a 15-item scale developed to assess the degree and type of role model influence on student's academic and vocational decisions. It consists of two subscales, Support/Guidance (S/G), 8-items, and Inspiration/Modeling (I/M), 7-items. The Support/Guidance (S/G) subscale includes items such as, "There is someone I can count on to be there if I need when I make academic and career choices." The Inspiration/Modeling (I/M) subscale included items such as, "There is someone I am trying to be like in my academic or career pursuits." Respondents endorse each item on a 5-point (1 = *strongly disagree* to 5 = *strongly agree*) Likert-type scale. Higher scores suggest greater levels of role model support and inspiration. Internal consistency coefficients for the Support/Guidance (S/G) subscale ranged from .90 to .94 and .89 to .91 for the Inspiration/Modeling (I/M) subscale. Cronbach's alphas of .90 (S/G) and .85

(I/M) were found for this study. Nauta and Kokaly (2001) also found test-retest coefficients of .94 (S/G) and .91 (I/M).

Career Decision Self-Efficacy-Short Form (CDSE-SF: Betz et al., 1996). The CDSE-SF has five subscales: a) self-appraisal (e.g., accurately assess your abilities), b) occupational information (e.g., use the internet to find information about occupations that interest you), c) goal selection (e.g., select one major from a list of potential majors you are considering), d) planning (e.g., make a plan of your goals for the next five years) and, e) problem-solving (e.g., persistently work at your major or career goal even when you get frustrated). These subscales also can be combined and used as a measure of Career Decision-making Self-Efficacy (CDSE); this study used the combined score to measure Career Decision-making Self-Efficacy (CDSE). Higher scores suggest higher Career Decision-making Self-Efficacy (CDSE). Cronbach's alphas ranged from .93 (Betz & Voyten, 1997) to .94 (Betz et al., 1996) for the 25-item total score. The internal consistency reliability for this study was .95 for the total measure.

Coping with Barriers Scale (CWB: Luzzo & McWhirter, 2001). The Coping with Barriers scale is comprised of 28 items with 7 items for the Coping self-efficacy with perceived Career barriers (CC) scale and 21 items for the Coping self-efficacy with perceived Educational barriers (EC) scale. The CWB scale uses a Likert-type response scale format ranging from "5" (highly confident) to "1" (not at all confident) with higher scores indicating higher confidence in participant's determination to overcome perceived barriers. Cronbach's alphas of .88 and .93 were reported for CC and EC, respectively (Luzzo & McWhirter, 2001). Cronbach's alphas of .94 were found for both subscales in this study.

The Positive and Negative Affect Scale (*PANAS*: Watson, Clark, & Tellegen, 1988) contains two 10-item scales assessing Positive Affect (PA) and Negative Affect (NA) throughout the past week. The PANAS was originally validated with a sample of nonclinical adults and continues to be used to gauge emotion among normal individuals. Measures of internal consistency range from .86 to .90 for Positive Affect (PA) and from .84 to .87 for Negative Affect (NA) (Watson et al., 1988). Reliability coefficients for this study were .89 for Positive Affect and .87 for Negative Affect.

*Life Orientation Test-Revised (LOT-R: Scheier, Carver, & Bridges, 1994).*The LOT–R (Scheier et al., 1994) is a 10-item self-report measure of generalized expectations for positive or negative outcomes (i.e., dispositional optimism, dispositional pessimism). The LOT–R contains three positively keyed items, three negatively keyed items, and four filler items. Scheier et al. (1994) reported a Cronbach's alpha internal consistency estimate of .78, with test-retest reliabilities ranging from .56 to .79. For this study, Cronbach's alphas of .67 Optimism (OPT) and .73 Pessimism (PESS) were found.

Career Decision Profile (CDP: Jones, 1988, 1989a, 1989b). The Career Decision Profile examines the degree of comfort and decidedness of a vocational choice and the reasons for being decided and undecided and contains 16 items. Responses are obtained using an 8-point Likert scale ranging from "1" (strongly disagree) to "8" (strongly agree). Jones (1989) reported internal-consistency coefficients ranging from .68 to .85. Support also was found for discriminant construct validity (Jones, 1989). Studies using the CDP have found that the Career Decidedness (CD) dimension correlated as predicted with other measures of career indecision and career salience. The internal consistency reliability for the Career Decidedness (CD) subscale was .79.

Three Component Model for Occupational Commitment (TCMOC: Meyer et al., 1993). College major commitment was measured using a modified version of Meyer et al.'s (1993) 18-item measure of commitment. Three types of college major commitment were measured including Affective (AFF), Continuance (CONT), and Normative (NORM) commitment. Meyer et al.'s items, which were written specifically for a sample of nurses, were modified by Chang and Hansen (2007) to reflect commitment to college major. For example, the item "Nursing is important to my self image" was adapted to "My current major is important to my self-image". Responses to these items were on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). In Meyer et al.'s study, coefficient alphas for these measures were .82, .76, and .80 for affective, continuance and normative commitment scales, respectively. Chang and Hansen (2007) found that the coefficient alphas were .85, .82, and .72 for affective, continuance and normative commitment scales, respectively. In this study, Cronbach's alphas were .86 (AFF), .86 (CONT) and .83 (NORM).

Analyses of Data

Data Analyses for Proposed Hypotheses: T-tests were conducted between groups and the total sample to investigate race/ethnic and sex differences among specific demographic variables. Pearson product-moment correlation coefficients were calculated for the total sample and each racial/ethnic group to determine the strength and direction of the relations between variables (i.e., hypotheses 7-12). Between and with-in sex and ethnic group differences were examined with a multivariate analysis of variance (MANOVA) for hypotheses 1 through 6. MANOVA's also were calculated comparing sex and race/ethnic differences for the total sample. Hierarchical linear regression

analyses were used to test the predicted moderation effect of coping self-efficacy on perceived barriers and career decidedness for each sex and racial/ethnic group and the total sample (Frazier, Tix, & Barron, 2004).

Additional Data Analyses: Because several questions emerged from the results of the original hypotheses, additional data analyses were conducted to explore these questions. Hierarchical multiple regression was used to examine the incremental and collective contributions of hypothesized key predictors [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Family support (FAM), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Coping self-efficacy with perceived Career Barriers (CC), Coping self-efficacy with perceived Educational Barriers (EC)] of Career Decidedness (CD) and Career Decision-making Self-Efficacy (CDSE) among the four groups (e.g., Hmong American male college students, Hmong American female college students, Caucasian American male college students, Caucasian American female college students). Following Quimby and O'Brien (2004), perceived Career Barriers (CB) and perceived Educational Barriers (EB) were entered as a block at the first step. Family support (FAM), role model Support/Guidance (S/G) and role model Inspiration/Modeling (I/M) were entered in the second block. Finally, Coping self-efficacy with perceived Career Barriers (CC) and Coping self-efficacy with perceived Educational Barriers (EC) were entered as a block at the third step.

Eight additional moderator effects were examined. Hierarchical linear regression analyses were used to test the expected moderator effect of the following moderators, Positive Affect (PA), Negative Affect (NA), Optimism (OPT), and Pessimism (PESS), on

perceived barriers and career decidedness for each sex and racial/ethnic group and the total sample (Frazier et al., 2004).

CHAPTER 3

Results

Analyses for Demographic Characteristics

T-tests were conducted to investigate race/ethnic and sex differences between groups for age and GPA. Chi square tests were conducted to investigate race/ethnic and sex differences between groups for categorical demographic variables (i.e., first generation status, socio-economic status, income, father's education, and mother's education). These results are presented in Tables 11-16. Sex comparisons among Hmong American college student revealed one significant difference with Hmong American female college students reporting a higher GPA than Hmong American male college students, t (168) = -3.20, $\underline{p} < .01$, $d = -.50$, which indicated a small to medium effect size. No sex differences were found among Caucasian American college students.

Examination of race/ethnic differences among Hmong American and Caucasian American female college students yielded significant differences. Hmong American female college students were significantly older, t (238) = 2.13, $\underline{p} < .05$, $d = -.28$; reported a lower GPA, t (238) = -6.68, $\underline{p} < .01$; $d = -.88$; were more likely to be a first generation college student, x^2 (1) = 8.34, $\underline{p} = .00$, Cramer's $\varphi = .19$; reported lower SES, x^2 (4) = .01, $\underline{p} = .00$, Cramer's $\varphi = .66$, and income, x^2 (6) = 97.78, $\underline{p} = .00$, Cramer's $\varphi = .63$; and reported lower levels of education completed by father, x^2 (10) = .01, $\underline{p} = .00$, Cramer's $\varphi = .69$, and mother, x^2 (10) = .02, $\underline{p} = .00$, Cramer's $\varphi = .80$. These results indicated a medium effect size for age, first generation college student status and large effect sizes for GPA, SES, income, and education level completed by father and mother.

Table 11.
T-test Analyses to Compare Age and GPA[+] Differences Among Participants

Hmong				
	Men (n = 70)	Women (n = 100)	t (df = 168)	*d*
Age (SD)	20.44 (1.83)	20.08 (1.83)	1.27	.19
GPA (SD)	2.72 (0.49)	2.95 (0.47)	-3.2 **	-.50
Caucasian				
	Men (n = 59)	Women (n = 138)	t (df = 195)	*d*
Age (SD)	19.90 (2.54)	19.78 (2.42)	0.30	.05
GPA (SD)	3.30 (0.47)	3.30 (0.41)	-.24	-.04
Women				
	Hmong (n = 102)	Caucasian (n = 138)	t (df = 238)	*d*
Age (SD)	20.08 (1.83)	19.62 (1.49)	2.13 *	.28
GPA (SD)	2.94 (0.44)	3.31 (0.41)	-6.68**	-.88
Men				
	Hmong (n = 73)	Caucasian (n = 60)	t (df = 126)	*d*
Age (SD)	20.44 (1.83)	19.60 (1.15)	3.03 **	.54
GPA (SD)	2.72 (0.49)	3.30 (0.47)	-6.87**	-1.23
Total Sample				
	Hmong (n = 179)	White (n = 196)	t (df = 370)	*d*
Age (SD)	20.23 (1.83)	19.82 (2.45)	1.80	.19
GPA (SD)	2.86 (.49)	3.31 (.43)	-9.45**	-.98
	Men (n= 136)	Women (n = 243)	t (df = 377)	*d*
Age (SD)	20.06 (1.61)	19.81 (1.65)	1.38	.15
GPA (SD)	2.98 (.56)	3.16 (.47)	-3.30**	-.35

+ GPA = Grade Point Average

Table 12.
Chi Square Analyses to Compare Sex Differences Among Hmong American College Students for Demographic Characteristics

	X^2	df	φ
First +	2.09	1	.11
SES +	.91	3	.07
Income +	5.48	6	.17
Fa_ed +	9.89	10	.23
Mo_ed +	5.16	10	.17

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Table 13.
Chi Square Analyses to Compare Sex Differences Among Caucasian American College Students for Demographic Characteristics

	X^2	df	φ
First +	.03	1	.01
SES +	.42	3	.05
Income +	3.75	5	.14
Fa_ed +	1.37	5	.08
Mo_ed +	3.18	5	.13

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Table 14.
Chi Square Analyses to Compare Race/Ethnic Differences Among Male College Students for Demographic Characteristics

	X^2	df	φ
First +	9.44**	1	.26
SES +	67.33**	4	.70
Income +	67.13**	6	.64
Fa_ed +	55.44**	10	.80
Mo_ed +	86.29**	9	.79

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Table 15.
Chi Square Analyses to Compare Race/Ethnic Differences Among Female American College Students for Demographic Characteristics

	X^2	df	φ
First +	8.34**	1	.19
SES +	.01**	4	.66
Income +	97.78**	6	.63
Fa_ed +	.01**	10	.69
Mo_ed +	.01**	10	.80

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Table 16.
Chi Square Analyses to Compare Race/Ethnic Differences Among Total Sample for Demographic Characteristics

	X^2	df	φ
First +	19.18**	1	.23
SES +	.01**	4	.68
Income +	.01**	6	.65
Fa_ed +	.01**	10	.67
Mo_ed +	.02**	10	.80

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Table 17.
Chi Square Analyses to Compare Sex Differences Among Total Sample for Demographic Characteristics

	X^2	df	φ
First +	3.39	1	.09
SES +	3.54	4	.09
Income +	5.21	6	.12
Fa_ed +	10.51	10	.17
Mo_ed +	11.44	10	.17

** Significant at the 0.01 level. *Significant at the 0.05 level.

+First Generation = First Generation College Student, SES= Socio-economic Status, Income = Family Income, Fa_ed = Highest education father completed, Mo_ed = Highest education mother completed

Results for race/ethnic differences between male college students also showed significant differences. Hmong American male college students were significantly older, t (126) = 3.03, $\underline{p} < .01$, $d = .54$; reported a lower GPA, t (126) = -6.87, $\underline{p} < .01$, $d = -1.23$; were more likely to be a first generation college student, x^2 (1) = 9.44, $\underline{p} = .00$, Cramer's $\varphi = .26$; reported lower SES, x^2 (4) = 67.33, $\underline{p} = .00$, Cramer's $\varphi = .70$, and income, x^2 (6) = 67.13, $\underline{p} = .00$, Cramer's $\varphi = .64$; and reported lower levels of education completed by father, x^2 (10) = 55.44, $\underline{p} = .00$, Cramer's $\varphi = .80$, and mother, x^2 (9) = 86.29, $\underline{p} = .00$, Cramer's $\varphi = .79$. A medium effect size was found for age, first generation college student status, education level completed by father; whereas, a large effect size was found for GPA, SES, income, and education level completed by mother.

Investigation of race/ethnic differences among the total sample illustrated a similar pattern with Hmong American college students reporting a lower GPA, (t (370) = -9.45, $\underline{p} < .01$, $d = -.98$; increase likelihood of being a first generation college student, x^2 (1) = 19.18, $\underline{p} = .00$, Cramer's $\varphi = .23$; lower SES, x^2 (4) = .01, $\underline{p} = .00$, Cramer's $\varphi = .23$, and income, x^2 (6) = .01, $\underline{p} = .00$, Cramer's $\varphi = .65$; and lower education level completed father, x^2 (10) = .01, $\underline{p} = .00$, Cramer's $\varphi = .67$, and mother, x^2 (10) = .02, $\underline{p} = .00$, Cramer's $\varphi = .80$. No significant race/ethnic differences for the total group were found for age, t (370) = 1.80, $\underline{p} < .01$, $d = .19$. These results indicated a medium effect size for first generation college student status and large effect sizes for GPA, SES, income, and education level completed by father and mother.

For comparisons of sex differences among the total group, a significant difference was found for GPA with female college students reporting higher GPA's than did male

college students, t (377) = -3.30, $p < .01$, $d = -.35$, indicating a small to medium effect size. All other comparisons were non-significant.

Correlation Results

Data Analyses for Proposed Hypotheses. Pearson product moment correlations were calculated to determine the strength and direction of the relations among the variables for each group (i.e., Caucasian American female college students, Caucasian American male college students, Hmong American male college students, Hmong American female college students). Tables 18 through 23 present significant ($p < .05$) Pearson product moment correlations for each group. Please refer to Appendix A, B, C and D for the complete Pearson Product moment correlation tables.

Intercorrelations between the perceived Educational Barriers (EB) scale and Coping self-efficacy with perceived Educational Barriers (EC) scale confirmed expected relations for Hmong American female college students ($r = -.44$, $p < .01$), Hmong American male college students ($r = -.49$, $p < .01$) and Caucasian American female college students ($r = -.37$, $p < .01$). All groups yielded a medium effect size. A non-significant relation between perceived Educational Barriers (EB) and Coping self-efficacy with perceived Educational Barriers (EC) was found for Caucasian American male college students ($r = -.07$, $p > .05$). Only Hmong American female college students reported a significant negative relation between the perceived Career Barriers (CB) scale and the Coping self-efficacy with perceived Career Barriers (CC) scale ($r = -.22$, $p < .05$) which indicated a medium effect size. No significant relations between the perceived Career Barriers (CB) scale and the Coping self-efficacy with perceived Career Barriers (CC) scale were found for Hmong American male college students ($r = .10$, $p > .05$),

Caucasian American female college students (r = -.12, p > .05) and Caucasian American male college students (r = -.16, p > .05).

Table 18. Pearson Product Moment Correlation Results for Hypothesis 1.

Hypothesis 1a.

A significant negative relation between perceived career barriers and coping self-efficacy with perceived career barriers will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
CB-CC	-.22*	.10	-.12	-.16

Hypothesis 1b.

A significant negative relation between perceived educational barriers and coping self-efficacy with educational barriers will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
EB-EC	-.44**	-.49**	-.37**	-.07

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers

Results indicated a non-significant relation between the Career Decision-making Self-Efficacy (CDSE) scale and the perceived Career Barriers (CB) scale for all groups, Hmong American female college students (r = -.15, p > .05), Hmong American male college students (r = -.11, p > .05), Caucasian American female college students (r = -.05, p > .05), Caucasian American male college students (r = -.03, p > .05). A significant negative relation was found between the Career Decision-making Self-Efficacy (CDSE) scale and the perceived Educational Barriers (EB) scale for Hmong American female college students (r = -.39, p < .01), Hmong American male college students (r = -.33, p < .01) and Caucasian American female college students (r = -.46, p < .01). These results indicated a large effect size for Hmong American female college students and Caucasian American female college students, and a medium to large effect size for Hmong American male college students. No significant relation was found between the Career Decision-making Self-Efficacy (CDSE) scale and the perceived Educational Barriers (EB) scale for Caucasian American male college students (r = -.24, p > .05)

Table 19. Pearson Product Moment Correlation Results for Hypothesis 2.

Hypothesis 2a.

A significant negative relation between perceived career barriers and career decision-making self-efficacy will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
CB-CDSE	-.15	-.11	-.05	-.03

Hypothesis 2b.

A significant negative relation between perceived educational barriers and career decision-making self-efficacy and will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
EB-CDSE	-.39**	-.33**	-.46**	-.24

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CDSE = Career Decision-Making Self-Efficacy

The relation between the Career Decision-making Self-Efficacy (CDSE) scale and Coping self-efficacy with perceived Career Barriers (CC) scale was significant for Hmong American female college students ($r = .36$, $p < .01$) which indicated a medium to large effect size. Non-significant relations between the Career Decision-making Self-Efficacy (CDSE) scale and Coping self-efficacy with perceived Career Barriers (CC) scale were found for Hmong American male college students ($r = .14$, $p > .01$), Caucasian American female college students ($r = .08$, $p > .01$) and Caucasian American male college students ($r = .07$, $p > .05$).

For the Career Decision-making Self-Efficacy (CDSE) scale and the Coping self-efficacy with perceived Educational Barriers (EC), a significant positive relation was found for Hmong American female college students ($r = .38$, $p < .01$), Hmong American male college students ($r = .53$, $p < .01$) and Caucasian American female college students ($r = .24$, $p < .01$). Results indicated a large effect size for Hmong American female and male college students and a medium effect size for Caucasian American female college students. A non-significant relation was found for Hmong American male college students ($r = -.24$, $p > .05$)

Table 20. Pearson Product Moment Correlation Results for Hypothesis 3.

Hypothesis 3a.

A significant positive relation between career decision-making self-efficacy and coping self-efficacy with perceived career barriers will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
CDSE-CC	.36**	.14	.08	.07

Hypothesis 3b.

A significant positive relation between career decision-making self-efficacy and coping self-efficacy with educational barriers will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
CDSE-EC	.38**	.53**	.24**	.17

CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, CDSE = Career Decision-Making Self-Efficacy

Significant positive correlations between the Career Decision-making Self-Efficacy (CDSE) scale and the Career Decidedness (CD) scale were found for all groups [i.e., Hmong American female college students (r = .53, p < .01), Hmong American male college students (r = .50, p < .01).Caucasian American female college students (r = .55, p < .01), Caucasian American male college students (r = .57, p < .01)]. These results indicated a large effect size for all groups.

Table 21. Pearson Product Moment Correlation Results for Hypothesis 4.

Hypothesis 4.
A significant positive relation between career decision-making self-efficacy and career decidedness will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
CDSE-CD	.53**	.50**	.55**	.57**

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Investigation of the correlations between the Positive Affect (PA) scale and the Career Decidedness (CD) scale indicated a significant positive relation for Hmong American male college students (r = .40, p < .01) and Caucasian American female college students (r = .47, p < .01) which indicated large effect sizes for both groups. Non-significant relations between the Positive Affect (PA) scale and the Career Decidedness (CD) scale were found for Hmong American female college students (r = -.15, p > .05) and Caucasian American male college students (r = .00, p > .05). Contrary to expectations, correlations between the Negative Affect (NA) scale and the Career Decidedness (CD) scale indicated a non-significant relation for all groups [i.e., Hmong American female college students (r = -.04, p > .05), Hmong American male college students (r = -.11, p > .0 5), Caucasian American female college students (r = -.03, p > .05), Caucasian American male college students (r = .24, p > .05)].

Table 22. Pearson Product Moment Correlation Results for Hypothesis 5.

Hypotheses 5a.
A significant positive relation between positive affect and career decidedness will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
PA-CD	.18	.40**	.47**	.00

Hypotheses 5b.
A significant positive relation between negative affect and career decidedness will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
NA-CD	-.04	-.11	-.03	.24

PA = Positive Affect, NA = Negative Affect, CD = Career Decidedness

Data indicated significant positive relations between the Optimism (OPT) scale and Career Decidedness (CD) for Caucasian American female college students (r = .38, p < .01) and Hmong American male college students (r = .31, p < .01). These results indicated a large effect size for Caucasian American female college students and a medium effect size for Hmong American male college students. Non-significant relations were found between the Optimism (OPT) scale and the Career Decidedness (CD) scale for Caucasian American male college students (r = -.13, p > .05) and Hmong American female college students (r = .13, p > .05).

A significant negative relation was found between the Pessimism (PESS) scale and the Career Decidedness (CD) scale for Caucasian American female college students (r = -.17, p < .05) which indicated a small effect size. Non-significant relations between the Pessimism (PESS) scale and the Career Decidedness (CD) scale were found for all other groups [e.g., Caucasian American male college students (r = .04, p > .05), Hmong American male college students (r = .02, p > .05), Hmong American female college students (r = -.15, p > .05)].

Table 23. Pearson Product Moment Correlation Results for Hypothesis 6.

Hypotheses 6a.

A significant positive relation between optimism and career decidedness will be found among all college students.

	Hmong		Caucasian	
	Women	Men	Women	Men
OPT-CD	.13	.31**	.38**	-.13

Hypotheses 6b.

A significant negative relation between pessimism and career decidedness will be found among all college students

	Hmong		Caucasian	
	Women	Men	Women	Men
PESS-CD	-.15	.02	-.17*	.04

OPT = Optimism, PESS = Pessimism, CD = Career Decidedness

Additional Data Analyses. Although no specific hypotheses were made about the following significant correlations between variables across samples (i.e., Hmong American male college students, Hmong American female college students, Caucasian American female college students, Caucasian American male college students), these relations were noted for consideration for future exploration. More evidence is needed to verify the extent to which these significant correlations are not due to error.

Nine significant relations between variables were found across all groups. A significant negative relation was found for perceived Educational Barriers (EB) and role model Support/Guidance (S/G) [e.g., Hmong American female college students (r = -.38, p < .01), Hmong American male college students (r = -.34, p < .01), Caucasian American female college students (r = -.52, p < .01), Caucasian American male college students (r = -.55, p < .01)]. In other words, all students who reported high levels of role model support reported less perceived educational barriers. Perceived Educational Barriers (EB) was found to significantly positively correlate with Pessimism (PESS) [e.g., Hmong American female college students (r = .36, p < .01), Hmong American male college students (r = .27, p < .05), Caucasian American female college students (r = .35, p < .01), Caucasian American male college students (r = .42, p < .01)].

A significant positive correlation was found between Family support (FAM) and Career Decision-making Self-Efficacy (CDSE) [e.g., Hmong American female college students (r = .42, p < .01), Hmong American male college students (r = .51, p < .01), Caucasian American female college students (r = .45, p < .01), Caucasian American male college students (r = .29, p < .05)], Family support (FAM) and role model Inspiration/Modeling (I/M) [e.g., Hmong American female college students (r = .37,

$p < .01$), Hmong American male college students ($r = .43$, $p < .01$), Caucasian American female college students ($r = .36$, $p < .01$), Caucasian American male college students ($r = .39$, $p < .01$)], and Family support (FAM) and role model Support/Guidance (S/G) [e.g., Hmong American female college students ($r = .52$, $p < .01$), Hmong American male college students ($r = .41$, $p < .01$), Caucasian American female college students ($r = .58$, $p < .01$), Caucasian American male college students ($r = .61$, $p < .01$)].

Data indicated significant positive relations across all groups for role model Inspiration/Modeling (I/M) and role model Support/Guidance (S/G) [e.g., Hmong American female college students ($r = .43$, $p < .01$), Hmong American male college students ($r = .51$, $p < .01$), Caucasian American female college students ($r = .43$, $p < .01$), Caucasian American male college students ($r = .35$, $p < .01$)]. Role model Support/Guidance (S/G) also was found to be significantly related to Affective commitment (AFF) for all groups [e.g., Hmong American female college students ($r = .25$, $p < .05$), Hmong American male college students ($r = .27$, $p < .05$), Caucasian American female college students ($r = .21$, $p < .05$), Caucasian American male college students ($r = .26$, $p < .05$)]. Affective commitment (AFF) also was found to be significantly positively correlated with Career Decision-making Self-Efficacy (CDSE) [e.g., Hmong American female college students ($r = .38$, $p < .01$), Hmong American male college students ($r = .58$, $p < .01$), Caucasian American female college students ($r = .41$, $p < .01$), Caucasian American male college students ($r = .43$, $p < .01$)] and Career Decidedness [e.g., Hmong American female college students ($r = .29$, $p < .01$), Hmong American male college students ($r = .48$, $p < .01$), Caucasian American female college students ($r = .38$, $p < .01$), Caucasian American male college students ($r = .44$, $p < .01$)].

Table 24. Nine Significant Pearson Product Moment Correlations Across All Groups

	Hmong		Caucasian	
	Women	Men	Women	Men
EB- SG	-.38**	-.34**	-.52**	-.55**
EB-PESS	.36**	.27*	.35**	.42**
FAM-CDSE	.42**	.51**	.45**	.29*
FAM-I/M	.37**	.43**	.36**	.39**
FAM-S/G	.52**	.41**	.58**	.61**
S/G-I/M	.43**	.51**	.43**	.35**
S/G-AFF	.25*	.27*	.21*	.26*
AFF-CDSE	.38**	.58**	.41**	.43**
AFF-CD	.29**	.48**	.38**	.44**

EB = Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness, PESS = Pessimism

Data indicated 20 significant relations between variables among Hmong American female college students, Hmong American male college students and Caucasian American female college students. Perceived Educational Barriers (EB) was significantly positively related to perceived Career Barriers (CB) [Hmong American female college students (r = .25, p < .05), Hmong American male college students (r = .63, p < .01), Caucasian American female college students (r = .33, p < .01)], and Negative Affect (NA) [Hmong American female college students (r = .45, p < .01), Hmong American male college students (r = .39, p < .01), Caucasian American female college students (r = .34, p < .01)]. A significant positive relation was found between Coping self-efficacy with perceived Educational Barriers (EC) and Coping Self-Efficacy with perceived Career Barriers (CC) [Hmong American female college students (r = .57, p < .01), Hmong American male college students (r = .33, p < .01), Caucasian American female college students (r = .52, p < .01)], role model Support/Guidance (S/G) [Hmong American female college students (r = .30, p < .01), Hmong American male college students (r = .33, p < .01), Caucasian American female college students (r = .35, p < .01)]. Coping self-efficacy with perceived Educational Barriers (EC) also was found to be significantly positively related to Family support (FAM) [Hmong American female college students (r = .31, p < .01), Hmong American male college students (r = .49, p < .01), Caucasian American female college students (r = .25, p < .01)].

Significant relations were found between Positive Affect (PA) and role model Support/Guidance (S/G) [Hmong American female college students (r = .32, p < .01), Hmong American male college students (r = .49, p < .01), Caucasian American female

college students (r = .41, p < .01)], role model Inspiration/Modeling (I/M) [Hmong American female college students (r = .35, p < .01), Hmong American male college students (r = .28, p < .05), Caucasian American female college students (r = .41, p < .01)], and Family support (FAM) [Hmong American female college students (r = .26, p < .01), Hmong American male college students (r = .39, p < .01), Caucasian American female college students (r = .37, p < .01)]. Positive Affect (PA) also was significantly positively related to Affective commitment (AFF) [Hmong American female college students (r = .25, p < .05), Hmong American male college students (r = .36, p < .01), Caucasian American female college students (r = .37, p < .01)], Optimism (OPT) [Hmong American female college students (r = .56, p < .01), Hmong American male college students (r = .47, p < .01), Caucasian American female college students (r = .48, p < .01)] and Career Decision-making Self-Efficacy (CDSE) [Hmong American female college students (r = .35, p < .01), Hmong American male college students (r = .71, p < .01), Caucasian American female college students (r = .49, p < .01)].

Career Decision-making Self-Efficacy (CDSE) also was found to be significantly positively correlated with role model Support/Guidance (S/G) [Hmong American female college students (r = .37, p < .01), Hmong American male college students (r = .53, p < .01), Caucasian American female college students (r = .53, p < .01)] and role model Inspiration/Modeling (I/M) [Hmong American female college students (r = .35, p < .01,), Hmong American male college students (r = .37, p < .01), Caucasian American female college students (r = .42, p < .01)]. A significant positive relation also was found between Career Decision-making Self-Efficacy (CDSE) and Optimism (OPT) [Hmong

American female college students (r = .35, p < .01), Hmong American male college students (r = .53, p < .01), Caucasian American female college students (r = .43, p < .01)].

Results indicated significant positive relations between Optimism (OPT) and Coping self-efficacy with perceived Educational Barriers (EC) [Hmong American female college students (r = .30, p < .01), Hmong American male college students (r = .37, p < .01), Caucasian American female college students (r = .22, p < .05)], role model Support/Guidance (S/G) [Hmong American female college students (r = .28, p < .01), Hmong American male college students (r = .24, p < .05), Caucasian American female college students (r = .36, p < .01)], role model Inspiration/Modeling ((I/M) [Hmong American female college students (r = .40, p < .01), Hmong American male college students (r = .27, p < .05), Caucasian American female college students (r = .39, p < .01)], Family support (FAM) [Hmong American female college students (r = .31, p < .01), Hmong American male college students (r = .44, p < .01), Caucasian American female college students (r = .23, p < .01)] and Affective commitment (AFF) [Hmong American female college students (r = .39, p < .01), Hmong American male college students (r = .33, p < .01), Caucasian American female college students (r = .20, p < .05)]. Affective commitment (AFF) also was found to be correlated with Family support (FAM) [Hmong American female college students (r = .27, p < .01), Hmong American male college students (r = .36, p < .01), Caucasian American female college students (r = .31, p < .01)].

Table 25. Twenty Significant Pearson Product Moment Correlations Across Hmong American Female, Hmong Male and Caucasian American Female College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
CB-EB	.25*	.63**	.33**	.15
EB-NA	.45**	.39**	.34**	.00
EC-CC	.57**	.33**	.52**	.21
EC-SG	.30**	.33**	.35**	.02
EC-FAM	.31**	.49**	.25**	.03
S/G-PA	.32**	.49**	.41**	.07
I/M-PA	.35**	.28*	.41**	.14
FAM-PA	.26**	.39**	.37**	.24
AFF-PA	.25*	.36**	.37**	-.01
OPT-PA	.56**	.47**	.48**	.13
CDSE-PA	.35**	.71**	.49**	.18
S/G-CDSE	.37**	.53**	.40**	-.07
I/M-CDSE	.35**	.37**	.42**	.13
OPT-CDSE	.35**	.53**	.43**	.04
EC-OPT	.30**	.37**	.22*	.15
S/G-OPT	.28**	.24*	.36**	.15
I/M-OPT	.40**	.27*	.39**	.24
FAM-OPT	.31**	.44**	.23**	-.02
AFF-OPT	.39**	.33**	.20*	.21
FAM-AFF	.27**	.36**	.31**	.21

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness, PA = Positive Affect, NA = Negative Affect, OPT = Optimism, AFF = Affective Commitment

Three significant correlations were found between variables for Hmong American female college students, Caucasian American female college students and Caucasian American male college students. Role model Inspiration/Modeling (I/M) was significantly positively correlated with Affective commitment (AFF) [Hmong American female college students (r = .41, p < .01), Caucasian American female college students (r = .28, p < .01), Caucasian American male college students (r = .26, p < .05)]. A significant positive relation also was found between Continuance commitment (CONT) and Normative commitment (NORM) [Hmong American female college students (r = .38, p < .01), Caucasian American female college students (r = .46, p < .01), Caucasian American male college students (r = .43, p < .01)]. Optimism (OPT) and Pessimism (PESS) were found to be significantly negatively correlated for these three groups [Hmong American female college students (r = -.26, p < .01), Caucasian American female college students (r = -.58, p < .01), Caucasian American male college students (r= -.56, p < .01)].

Although three significant relations between variables were found for Hmong American female college students, Caucasian American female college students, Caucasian American male college students, only one significant relation between variables was found for Hmong American male college students, Caucasian American female college students and Caucasian American male college students. One significant negative relation between Optimism (OPT) and Negative Affect (NA) was found for Hmong American male college students (r = -.29, p < .05), Caucasian American female college students (r = -.32, p < .01), and Caucasian American male college students (r = -.37, p < .01).

Table 26.
Three Significant Pearson Product Moment Correlations Across Hmong American Female, Caucasian American Female and Caucasian American Male College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
I/M-AFF	.41**	.18	.28**	.26*
CON-NORM	.38**	.19	.46**	.43**
OPT-PESS	-.26**	-.07	-.58**	-.56**

I/M = Role Model Inspiration/Modeling, AFF = Affective Commitment, CON = Continuance Commitment, NORM = Normative Commitment, OPT = Optimism, PESS = Pessimism

Table 27.
One Significant Pearson Product Moment Correlation Across Hmong American Male, Caucasian American Female and Caucasian American Male College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
OPT-NA	-.19	-.29*	-.32**	-.37**

OPT = Optimism, NA = Negative Affect

Fourteen significant relations between variables were found across Hmong American female college students and Caucasian American female college students. A significant positive relation was found between perceived Educational Barriers (EB) and Coping self-efficacy with perceived Career Barriers (CC) [Hmong American female college students (r = -.29, p < .01), Caucasian American female college students (r = -.22, p < .05)]. A significant negative relation was found between perceived Educational Barriers (EB) and Continuance commitment (CONT) [Hmong American female college students (r = .29, p < .01), Caucasian American female college students (r = .22, p < .05)]. Role model Inspiration/Modeling (I/M) [Hmong American female college students (r = .29, p < .01) and Caucasian American female college students (r = .32, p < .01)] and Family support (FAM) [Hmong American female college students (r = .29, p < .01) and Caucasian American female college students (r = .35, p < .01)] also were significantly positively related to Career Decidedness (CD).

Negative Affect (NA) and Pessimism (PESS) were significantly positively related for Hmong American female college students (r = .28, p < .01) and Caucasian American female college students (r = .43, p < .01). Negative Affect (NA) also was found to be significantly negatively related to Coping self-efficacy with perceived Educational Barriers (EC) [Hmong American female college students (r = -.22, p < .05), Caucasian American female college students (r = -.29, p < .01)], role model Support/Guidance (S/G) [Hmong American female college students (r = -.28, p < .01), Caucasian American female college students (r = -.37, p < .01)], and Family support (FAM) [Hmong American female college students (r = -.25, p < .05), Caucasian American female college students (r = -.22, p < .01)].

Six significant relations were found between Pessimism (PESS) and other career variables for Hmong American female college students and Caucasian American female college students. Pessimism (PESS) was significantly negatively related to Coping self-efficacy with perceived Educational Barriers (EC) [Hmong American female college students (r = -.28, p < .01), Caucasian American female college students (r = -.23, p < .01)], Coping self-efficacy with perceived Career Barriers (CC) [Hmong American female college students (r = -.35, p < .01), Caucasian American female college students (r = -.33, p < .01)]. Pessimism (PESS) also was significantly negatively related to role model Inspiration/Modeling (I/M) [Hmong American female college students (r = -.21, p < .05), Caucasian American female college students (r = -.24, p < .01)] and Family support (FAM) [Hmong American female college students (r = -.37, p < .01), Caucasian American female college students (r = -.23, p < .01)]. Other significant negative relations were found between Pessimism (PESS) and Affective commitment (AFF) [Hmong American female college students (r = -.21, p < .05), Caucasian American female college students (r = -.18, p < .05)], and Pessimism (PESS) and Career Decision-making Self-Efficacy (CDSE) [Hmong American female college students (r = -.32, p < .01), Caucasian American female college students (r = -.27, p < .01)].

Table 28.
Fourteen Significant Pearson Product Moment Correlations Across Hmong American Female and Caucasian American Female College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
	HW	HM	WW	WM
EB-CC	-.29**	-.12	-.22*	-.10
EB-CON	.29**	.06	.22*	.00
I/M-CD	.29**	.13	.32**	.22
FAM-CD	.29**	.20	.35**	.21
PESS-NA	.28**	.19	.43**	.09
EC-NA	-.22*	-.15	-.29**	.06
S/G-NA	-.28**	.16	-.37**	-.10
FAM-NA	-.25*	-.23	-.22**	-.04
EC- PESS	-.28**	-.09	-.23**	-.14
CC- PESS	-.35**	.12	-.33**	.08
I/M- PESS	-.21*	-.17	-.24**	-.19
FAM- PESS	-.37**	-.21	-.23**	-.08
AFF- PESS	-.21*	-.15	-.18*	-.15

EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness, CONT = Continuance Commitment, AFF = Affective Commitment, CONT = Continuance Commitment, PESS = Pessimism, NA = Negative Affect,

Five significant relations were found between variables for Hmong American male college students and Caucasian American female college students. Perceived Educational Barriers (EB) was significantly negatively related to Positive Affect (PA) [Hmong American male college students (r = -.32, p < .01), Caucasian American female college student (r = -.33, p < .01)] and Affective commitment (AFF) [Hmong American male college students (r = -.26, p < .05), Caucasian American female college student (r = -.25, p < .01)]. Significant negative relations were found between perceived Career Barriers (CB) and Coping self-efficacy with perceived Educational Barriers (EC) [Hmong American male college students (r = -.32, p < .01), Caucasian American female college student (r = -.19, p < .05)], and Continuance commitment (CONT) and Optimism (OPT) [Hmong American male college students (r = -.24, p < .05), Caucasian American female college student (r = -.17, p < .05)]. A significant positive relation was found between role model Support/Guidance (S/G) and Career Decidedness (CD) [Hmong American male college students (r = .25, p < .05), Caucasian American female college student (r = .29, p < .01).

Table 29.
Five Significant Pearson Product Moment Correlations Across Hmong American Male and Caucasian American Female College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
EB-PA	-.18	-.32**	-.33**	-.09
EB-AFF	-.07	-.26*	-.25**	-.22
CB-EC	-.09	-.32**	-.19*	-.00
CON-OPT	-.14	-.24*	-.17*	-.10
S/G-CD	.16	.25*	.29**	.05

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, C = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CD = Career Decidedness, PA = Positive Affect, AFF = Affective Commitment, CON = Continuance Commitment, OPT = Optimism,

Other significant relations between variables also were found across two groups. Caucasian American female college students and Caucasian American male college students reported significant negative relations between perceived Educational Barriers (EB) and Optimism (OPT) [Caucasian American female college students (r = -.31, p < .01), Caucasian American male college students (r = -.27, p < .05)], and role model Support/Guidance (S/G) and Pessimism (PESS) [Caucasian American female college students (r = -.28, p < .01), Caucasian American male college students (r = -.29, p < .05)]. For Hmong American college students, a significant positive relation was found between Coping self-efficacy with perceived Educational Barriers (EC) and Positive Affect (PA) [Hmong American female college students (r = .37, p < .01) and Hmong American male college students (r = .43, p < .01)]. Across the male sample, a significant positive relation was found between Coping self-efficacy with perceived Educational Barriers (EC) and Career Decidedness (CD) for Hmong American male college students (r = .24, p < .05) and Caucasian American male college students (r = .37, p < .01).

Table 30.
Significant Pearson Product Moment Correlations Across Two Groups

Two Significant Pearson Product Moment Correlations Across Caucasian American College Students				
	Hmong		Caucasian	
	Women	Men	Women	Men
S/G-PESS	-.18	.04	-.28**	-.29*
EB-OPT	-.10	-.22	-.31**	-.27*
One Significant Pearson Product Moment Correlations Across Hmong American College Students				
	Hmong		Caucasian	
	Women	Men	Women	Men
EC-PA	.37**	.43**	.13	.09
One Significant Pearson Product Moment Correlations Across Male College Students				
	Hmong		Caucasian	
	Women	Men	Women	Men
EC-CD	.07	.24*	.07	.37**

EB = Perceived Educational Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, CD = Career Decidedness, PESS = Pessimism, OPT = Optimism, PA = Positive Affect

Twelve significant relations between variables were found for Caucasian American female college students. Perceived Career Barriers (CB) was found to be significantly negatively related to Career Decidedness (CD) [Caucasian American female college students (r = -.17, p < .05)], and Optimism (OPT) [Caucasian American female college students (r = -.21, p < .05)]. A significant negative relation was found between perceived Educational Barriers (EB) and Career Decidedness (CD) [Caucasian American female college students (r = -.18, p < .01)], and perceived Educational Barriers (EB) and role model Inspiration/Modeling (I/M) [Caucasian American female college students (r = .32, p < .01)]. Coping self-efficacy with perceived Educational Barriers (EC) was found to be significantly positively related to role model Inspiration/Modeling (I/M) for Caucasian American female college students (r = .23, p < .01).

Among the commitment variables, Continuance commitment (CONT) was significantly negatively correlated with role model Support/Guidance (S/G) [Caucasian American female college students (r = -.24, p < .01)], Family support (FAM) [Caucasian American female college students (r = -.29, p < .01)], and Career Decision-making Self-Efficacy (CDSE) [Caucasian American female college students (r = -.19, p < .05)]. Normative commitment (NORM) was significantly positively related to Affective commitment (AFF) [Caucasian American female college students (r = .18, p < .05)] and Career Decidedness (CD) [Caucasian American female college students (r = .19, p < .05)]. For the dispositional characteristics, significant negative relations were found between Negative Affect (NA) and role model Inspiration/Modeling (I/M) [Caucasian American female college students (r = -.18, p < .05)], and Negative Affect (NA) and Positive Affect (PA) [Caucasian American female college students (r = -.22, p < .01)].

Table 31.
Twelve Significant Pearson Product Moment Correlations for Caucasian American Female College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
CB-CD	-.05	-.09	-.17*	-.06
CB-OPT	.06	.02	-.21*	.22
EB-CD	-.07	-.16	-.18*	.00
EB- IM	-.15	-.21	-.32**	-.17
EC- IM	.11	.23	.23**	-.13
S/G-CON	-.02	-.22	-.24**	-.15
FAM-CON	.02	-.05	-.29**	.04
CON-CDSE	-.05	-.12	-.19*	.17
AFF-NORM	.08	.16	.18*	.09
NORM-CD	.14	.07	.19*	.25
I/M-NA	-.18	-.09	-.18*	-.06
PA-NA	-.03	.04	-.22**	-.21

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness, OPT = Optimism, CON = Continuance Commitment, AFF = Affective Commitment, NORM = Normative Commitment, NA = Negative Affect, PA = Positive Affect

Seven significant relations between variables were found for Hmong American female college students. A significant positive relation was found between Coping self-efficacy with perceived Career Barriers (CC) and Positive Affect (PA) [Hmong American female college students (r = .37, p < .01)], Coping self-efficacy with perceived Career Barriers (CC) and Optimism (OPT) [Hmong American female college students (r = .31, p < .01)], and Coping self-efficacy with perceived Career Barriers (CC) and Family support (FAM) [Hmong American female college students (r = .23, p < .05)]. For dispositional characteristics, Negative Affect (NA) was significantly positively correlated with perceived Career Barriers (CB) [Hmong American female college students (r = .34, p < .01)], Continuance commitment (CONT) [Hmong American female college students (r = .24, p < .05)], and Normative commitment (NORM) [Hmong American female college students (r = .20, p < .05)]. A significant negative relation was found between Negative Affect (NA) and Career Decision-making Self-Efficacy (CDSE) [Hmong American female college students (r = -.26, p < .01)].

Table 32.
Seven Significant Pearson Product Moment Correlations for Hmong American Female College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
CC-PA	.37**	.09	.04	.11
CC-OPT	.31**	.07	.09	-.05
CC- FAM	.23*	.15	.08	.08
CB-NA	.34**	.23	.16	-.12
CON-NA	.24*	-.00	.11	-.12
NOR-NA	.20*	-.04	.13	-.09
CDSE-NA	-.26**	-.13	-.14	.05

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness, PA = Positive Affect, NA = Negative Affect, CON = Continuance Commitment, NOR = Normative Commitment

A significant positive relation was found between Coping self-efficacy with perceived Educational Barriers (EC) and Affective commitment (AFF) for Hmong American male college students ($r = .30$, $\underline{p} < .05$). A significant positive relation was found between Coping self-efficacy with perceived Career Barriers (CC) and Career Decidedness (CD) for Caucasian American male college students ($r = .35$, $\underline{p} < .01$).

Table 33.
One Significant Pearson Product Moment Correlation for Hmong American Male College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
EC-AFF	.11	.30*	.13	.15

Table 34.
One Significant Pearson Product Moment Correlation for Caucasian American Male College Students

	Hmong		Caucasian	
	Women	Men	Women	Men
CC-CD	.11	.06	-.03	.35**

CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, CD = Career Decidedness, AFF = Affective Commitment

MANOVA Results

A two-by-two multivariate analysis of variance (MANOVA) was used to investigate race/ethnic and sex differences in the relations among these variables [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Coping self-efficacy with perceived Educational Barriers (EC), Coping self-efficacy with perceived Career Barriers (CC), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Family support (FAM), Career Decision-making Self-Efficacy (CDSE), Career Decidedness (CD)]. Results were significant for the main effects, race/ethnicity, Wilks' Λ = .88, F (9, 368) = 5.42, $\underline{p}$ = .00, η^2 = .12, and sex, Wilks' Λ = .56, F (9, 368) = 32.66, $\underline{p}$ = .00, η^2 = .44. Results were non-significant for the interaction effect of race/ethnicity x sex, Wilks' Λ = .97, F (9, 368) = 1.42, $\underline{p} > .05$, η^2 = .03. Specific MANOVA results are presented in Tables 35 through 41 with means and standard deviations associated with these comparisons.

Follow-up univariate analyses for race/ethnic difference found that Hmong American college students reported more perceived Career Barriers (CB), more perceived Educational Barriers (EB), less Coping self-efficacy with perceived Educational Barriers (EC), less Coping self-efficacy with perceived Career Barriers (CC), less role model Support/Guidance (S/G), less role model Inspiration/Modeling (I/M), less Family support (FAM), less Career Decision-making Self-Efficacy (CDSE) and less Career Decidedness (CD) than Caucasian American college students. These results were in the expected direction.

Follow-up univariate analyses for sex differences indicated that female college students reported more perceived Career Barriers (CB), more perceived Educational

Barriers (EB), less Coping self-efficacy with perceived Educational Barriers (EC), more role model Support/Guidance (S/G) and less Career Decision-making Self-Efficacy (CDSE) than male college students. Male college students reported less Coping self-efficacy with perceived Career Barriers (CC) than female college students. No significant sex differences were found for role model Inspiration/Modeling (I/M), Family support (FAM) and Career Decidedness (CD).

Table 35.
Two by Two MANOVA Results for Race/Ethnic Comparisons Among the Total Sample

	Hmong (n = 182)		Caucasian (n = 198)		
	M	SD	M	SD	F(9, 370)
CB	2.95	.79	2.02	.71	55.60**
EB	2.62	.67	1.85	.50	158.34**
EC	3.71	.68	4.11	.60	45.95**
CC	3.63	.84	4.08	.82	169.33**
S/G	3.65	.76	4.17	.78	41.59**
I/M	3.16	.76	3.44	.87	12.04**
FAM	3.38	.68	4.16	.68	121.83**
CDSE	3.48	.64	3.91	.49	58.79**
CD	5.29	1.33	5.67	1.13	9.32**

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Table 36.
Two by Two MANOVA Results for Sex Comparisons Among the Total Sample

	Women (n = 243)		Men (n = 137)		
	M	SD	M	SD	F(9, 370)
CB	2.57	.85	2.29	.93	4.27*
EB	2.24	.69	2.18	.71	6.49*
EC	3.89	.67	3.98	.67	4.86*
CC	3.86	.78	3.87	.99	27.90**
S/G	4.00	.81	3.78	.80	3.66*
I/M	3.36	.84	3.22	.80	1.24
FAM	3.80	.82	3.75	.71	.45
CDSE	3.67	.59	3.77	.62	6.39*
CD	5.52	1.21	5.44	1.29	.05

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Table 37.
Two by Two MANOVA Results for Race/Ethnicity X Sex Comparisons Among the Total Sample

	Women (n = 243)		Men (n = 137)		
	M	SD	M	SD	F(9, 370)
CB	2.57	.85	2.29	.93	6.82*
EB	2.24	.69	2.18	.71	.38
EC	3.89	.67	3.98	.67	4.28*
CC	3.86	.78	3.87	.99	2.72
S/G	4.00	.81	3.78	.80	1.22
I/M	3.36	.84	3.22	.80	2.40
FAM	3.80	.82	3.75	.71	1.19
CDSE	3.67	.59	3.77	.62	.79
CD	5.52	1.21	5.44	1.29	.84

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

A one-way multivariate analysis of variance (MANOVA) was used to investigate race/ethnic and sex differences in the relations among these variables [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Coping self-efficacy with perceived Educational Barriers (EC), Coping self-efficacy with perceived Career Barriers (CC), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Family support (FAM), Career Decision-making Self-Efficacy (CDSE), Career Decidedness (CD)]. All MANOVA results are presented in Tables 21 through 24 with means and standard deviations associated with these comparisons.

Investigation of sex differences within ethnic groups provided significant multivariate effects for perceived Career Barriers (CB), perceived Educational Barriers (EB), Coping self-efficacy with perceived Educational Barriers (EC), Coping self-efficacy with perceived Career Barriers (CC), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Family support (FAM), Career Decision-making Self-Efficacy (CDSE), Career Decidedness (CD) among Caucasian American college students (Wilks' $\Lambda = .80$, $F (9, 188) = 5.16$, $\underline{p} = .001$, $\eta^2 = .20$) and Hmong American college students (Wilks' $\Lambda = .88$, $F (9, 172) = 2.66$, $\underline{p} = .00$, $\eta^2 = .12$). These results specify a small effect size for Caucasian American college students.

Follow-up univariate analyses indicated that Caucasian American female college students reported more perceived Career Barriers (CB), more perceived Educational Barriers (EB), less Coping self-efficacy with perceived Educational Barriers (EC), less Coping self-efficacy with perceived Career Barriers (CC), and less Career Decision-making Self-Efficacy (CDSE) than did Caucasian American male college students. For the Hmong American college students, follow-up univariate analyses provided evidence

to support the hypothesis that Hmong American female college students reported more perceived Career Barriers (CB) than did Hmong American male college students. Contrary to expectations, results also showed that Hmong American female college students reported more role model Support/Guidance (S/G) and more role model Inspiration/Modeling (I/M) than did their male counterparts.

Table 38.
MANOVA Results for Sex Comparisons among Hmong American College Students

	Hmong American				
	Women (n = 105)		Men (n = 77)		
	M	SD	M	SD	F (9, 172)
CB	3.08	.74	2.79	.85	5.81*
EB	2.67	.67	2.55	.68	1.47
EC	3.70	.67	3.71	.69	.01
CC	3.70	.74	3.53	.96	1.79
S/G	3.75	.77	3.50	.73	4.88*
I/M	3.26	.79	3.03	.69	4.34*
FAM	3.39	.73	3.36	.60	.09
CDSE	3.44	.65	3.54	.62	1.07
CD	5.36	1.25	5.21	1.43	.57

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Table 39.
MANOVA Results for Sex Comparisons among Caucasian American College Students

	Caucasian American				
	Women (n = 138)		Men (n = 60)		
	M	SD	M	SD	F (9, 188)
CB	2.18	.72	1.64	.54	27.68**
EB	1.91	.52	1.71	.43	6.82**
EC	4.02	.63	4.32	.47	10.34**
CC	3.98	.79	4.31	.86	6.80**
S/G	4.19	.79	4.13	.76	.31
I/M	3.43	.87	3.47	.87	.08
CSS	4.12	.75	4.25	.49	1.51
CDSE	3.85	.48	4.06	.48	7.78**
CD	5.64	1.18	5.73	1.00	.28

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

A one-way MANOVA yielded a significant multivariate effect for ethnicity for the total sample for perceived Career Barriers (CB), perceived Educational Barriers (EB), Coping self-efficacy with perceived Educational Barriers (EC), Coping self-efficacy with perceived Career Barriers (CC), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Family support (FAM), Career Decision-making Self-Efficacy (CDSE), Career Decidedness (CD), Wilks' $\Lambda = .58$, $F (9, 370) = 29.91$, $\underline{p} = .00$, $\eta^2 = .42$. This result indicated a small to medium effect size. Hmong American college students reported more perceived Career Barriers (CB), more perceived Educational Barriers (EB), less Coping self-efficacy with perceived Educational Barriers (EC), less Coping self-efficacy with perceived Career Barriers (CC), less role model Support/Guidance (S/G), less role model Inspiration/Modeling (I/M), less family support (CSS), less Career Decision-making Self-Efficacy (CDSE) and less Career Decidedness (CD) than did Caucasian American college students.

Table 40.
MANOVA Results for Ethnic Comparisons Among the Total Sample

	Hmong (n = 182)		Caucasian (n = 198)		
	M	SD	M	SD	F(9, 370)
CB	2.95	.79	2.02	.71	145.72**
EB	2.62	.67	1.85	.50	159.36**
EC	3.71	.68	4.11	.60	38.24**
CC	3.63	.84	4.08	.82	27.82**
S/G	3.65	.76	4.17	.78	44.39**
I/M	3.16	.76	3.44	.87	11.08**
FAM	3.38	.68	4.16	.68	125.16**
CDSE	3.48	.64	3.91	.49	55.06**
CD	5.29	1.33	5.67	1.13	8.83**

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Investigation of sex differences for the total sample using a one-way MANOVA for combined racial/ethnic groups showed a significant multivariate effect (Wilks' Λ = .93, F (9, 370) = 3.34, p = .00, η^2 = .42) for perceived Career Barriers (CB), perceived Educational Barriers (EB), Coping self-efficacy with perceived Educational Barriers (EC), Coping self-efficacy with perceived Career Barriers (CC), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Family support (FAM), Career Decision-making Self-Efficacy (CDSE), Career Decidedness (CD). Results indicated a medium effect size. Follow-up univariate analyses indicated that this effect was limited to perceived Career Barriers (CB). Female college students reported more perceived Career Barriers (CB) than did male college students. Contrary to the hypothesis that female college student would report less role model Support/Guidance (S/G) than male college students, the analysis found that female college students reported more role model Support/Guidance (S/G) than did their male counterparts.

Table 41.
MANOVA Results for Sex Comparisons Among the Total Sample

	Women (n = 243)		Men (n = 137)		
	M	SD	M	SD	F(9, 370)
CB	2.57	.85	2.29	.93	9.07**
EB	2.24	.69	2.18	.71	.59
EC	3.89	.67	3.98	.67	1.63
CC	3.86	.78	3.87	.99	.02
S/G	4.00	.81	3.78	.80	6.92**
I/M	3.36	.84	3.22	.80	2.39
FAM	3.80	.82	3.75	.71	.44
CDSE	3.67	.59	3.77	.62	2.08
CD	5.52	1.21	5.44	1.29	.38

**Significant at the 0.01 level *Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, FAM = Family Support, CDSE = Career Decision-Making Self-Efficacy, CD = Career Decidedness

Hierarchical Multiple Regression Results

Hierarchical multiple regression was used to examine the incremental and collective contributions of hypothesized key predictors [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Family support (FAM), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Coping self-efficacy with perceived Career Barriers (CC), Coping self-efficacy with perceived Educational Barriers (EC)] of Career Decidedness (CD) and Career Decision-making Self-Efficacy (CDSE) among the four groups (e.g., Hmong American male college students, Hmong American female college students, Caucasian American male college students, Caucasian American female college students). Following Quimby and O'Brien (2004), perceived Career Barriers (CB) and perceived Educational Barriers (EB) were entered as a block at the first step. Family support (FAM), role model Support/Guidance (S/G) and role model Inspiration/Modeling (I/M) were entered in the second block. Finally, Coping self-efficacy with perceived Career Barriers (CC) and Coping self-efficacy with perceived Educational Barriers (EC) were entered as a block at the third step. See Tables 42 and 43 for results.

The pattern of variable contributions differed among groups for Career Decidedness (CD). For Hmong American female college students, family support (FAM) and role model Inspiration/Modeling (I/M) accounted for 14% of the Career Decidedness (CD) variance. For Hmong American male college students, none of the entered variables accounted for Career Decidedness (CD). For Caucasian American female college students, perceived Career Barriers (CB) and perceived Educational Barriers (EB) accounted for 5% of the Career Decidedness (CD) variance with an additional 15%

accounted for by family support (FAM) and role model Inspiration/Modeling (I/M). For Caucasian American male college students, only Coping self-efficacy with perceived Educational Barriers (EC) accounted for 19% of the Career Decidedness (CD) variance.

The hierarchical multiple regression used to examine the incremental and collective contributions of the key predictors [i.e., perceived Career Barriers (CB), perceived Educational Barriers (EB), Family support (FAM), role model Support/Guidance (S/G), role model Inspiration/Modeling (I/M), Coping self-efficacy with perceived Career Barriers (CC), Coping self-efficacy with perceived Educational Barriers (EC)], Career Decision-making Self-efficacy] found different patterns of variable contributions among groups. For Hmong American female college students, perceived Educational Barriers (EB) accounted for 17% of the Career Decision making Self-efficacy (CDSE) variance and the subsequent entry of role model Inspiration/Modeling (I/M) accounted for an additional 17%. For Hmong American male college students, family support (FAM) and role model Support/Guidance (S/G) contributed 33% of the Career Decision making Self-efficacy (CDSE) variance with an additional 9% for Coping self-efficacy with perceived Educational Barriers (EC). For Caucasian American female college students, perceived Educational Barriers (EB) accounted for 22% of the Career Decision making Self-efficacy (CDSE) variance with an additional 11% accounted for by family support (FAM) and role model Inspiration/Modeling (I/M). For Caucasian American male college students, perceived Educational Barriers (EB), family support (FAM) and role model Support/Guidance (S/G) accounted for 23% of the Career Decidedness (CD) variance.

Table 42.
Sex and Race/Ethnic Comparisons: Summary of Hierarchical Regression Analyses for Variables Predicting Career Decidedness Scores Among Participants

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1																
CB	-.01	.17	-.01	.00	-.08	.24	-.05	.01	-.21	.15	-.13	.05*	-.14	.25	-.08	.01
EB	-.08	.19	-.04		-.06	.31	-.03		-.30	.20	-.13		-.06	.31	-.03	
Step 2																
CB	-.09	.17	-.06	.14**	-.05	.24	-.03	.07	-.25	.14	-.15	.15**	-.11	.24	-.06	.09
EB	.16	.20	.09		.15	.32	-.07		.32	.23	.14		.07	.36	.03	
FAM	.39	.19	.23*		.37	.33	.15		.43	.16	.27**		.59	.35	.29	
S/G	-.05	.19	-.03		.33	.28	.17		.16	.16	.11		-.26	.23	-.19	
I/M	.42	.17	.27*		.07	.29	.03		.28	.12	.21*		.21	.16	.18	
Step 3																
CB	-.09	.17	-.05	.00	-.03	.25	-.02	.01	-.26	.14	-.16	.01	-.07	.22	-.04	.19**
EB	.16	.22	.08		.23	.34	.11		.27	.24	.12		.17	.33	.07	
FAM	.39	.19	.23*		.28	.34	.12		.42	.16	.27*		.51	.31	.25	
S/G	-.05	.19	-.03		.30	.28	.15		.18	.16	.12		-.22	.21	-.16	
I/M	.42	.17	.26*		.05	.30	.03		.29	.12	.22*		.27	.15	.24	
CC	.01	.20	.01		-.03	.21	-.02		-.11	.14	-.07		.16	.14	.14	
EC	-.02	.23	-.01		.30	.31	.15		-.08	.19	-.04		.87	.25	.41**	
Total ΔR^2				.14				.09				.21				.29

**Significant at the 0.01 level* Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, FAM = Family Support, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, CC = Coping Self-Efficacy with Perceived Career Barriers, EC = Coping Self-Efficacy with Perceived Educational Barriers

Table 43.
Sex and Race/Ethnic Comparisons: Summary of Hierarchical Regression Analyses for Variables Predicting Career Decision-making Self-Efficacy Scores Among Participants

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1																
CB	-.05	.08	-.06	.17**	.02	.10	.02	.03	.08	.05	.11	.22**	-.02	.11	-.02	.08
EB	-.38	.09	-.39**		-.17	.13	-.18		-.46	.07	.49**		-.31	.14	-.28*	
Step 2																
CB	-.10	.08	-.12	.13**	.05	.09	.07	.33*	.07	.05	.10	.11**	.00	.10	.00	.23**
EB	-.23	.09	-.24**		.03	.12	.03		-.26	.09	-.28**		-.41	.15	-.37**	
FAM	.12	.09	.14		.35	.12	.34**		.13	.06	.19*		.43	.14	.44**	
S/G	.11	.09	.12		.30	.10	.35**		.03	.06	.04		-.37	.09	-.59**	
I/M	.18	.08	.22*		.06	.10	.07		.14	.04	.25**		.07	.07	.12	
Step 3																
CB	-.08	.08	-.09	.04*	.07	.09	.09	.09**	.07	.05	.10	.00	.00	.09	.00	.05
EB	-.16	.09	-.17		.12	.11	.13		-.26	.09	-.28**		-.39	.15	-.36*	
FAM	.09	.09	.11		.24	.12	.23*		.12	.06	.19*		.41	.14	.42**	
S/G	.08	.09	.10		.27	.09	.32**		.02	.06	.03		-.37	.09	-.59**	
I/M	.18	.08	.23*		.06	.10	.06		.14	.04	.25**		.09	.07	.17	
CC	.09	.09	.11		-.02	.07	-.03		-.04	.05	-.06		-.07	.06	-.12	
EC	.15	.11	.15		.35	.10	.38**		.06	.07	.07		.19	.12	.19**	
Total ΔR^2				.34				.45				.33				.46

**Significant at the 0.01 level* Significant at the 0.05 level

CB = Perceived Career Barriers, EB = Perceived Educational Barriers, FAM = Family Support, S/G = Role Model Support/Guidance, I/M = Role Model Inspiration/Modeling, CC = Coping Self-Efficacy with Perceived Career Barriers,
EC = Coping Self-Efficacy with Perceived Educational Barriers

Moderator Results

Data Analyses for Proposed Hypotheses. Hierarchical linear regression was used to examine two proposed moderator effects: a) Coping self-efficacy with perceived Educational Barriers (EC) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) and b) Coping self-efficacy with perceived Career Barriers (CC) would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for each group and the total sample. See Figure 1 and 2 for the proposed relations. The method of testing the significance of the two moderator effects was followed according to Frazier and colleagues (2004). Tables 44 through 47 present the results testing the moderator effect.

Although Coping self-efficacy with perceived Educational Barriers (EC) was hypothesized to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD), results indicated non-significant relations for all groups. The interaction term for perceived Educational Barriers (EB) and Coping self-efficacy with perceived Educational Barriers (EC) was non-significant for Hmong American male college students (B = .00, p > .05), Hmong American female college students (B = -.23, p > .05), Caucasian American male college students (B = .22, p > .05) and Caucasian American female college students (B = -.32, p > .05).

A non-significant moderator effect also was found for the hypothesized moderator, Coping self-efficacy with perceived Career Barriers (CC), on the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for all groups. In other words, examination of the interaction term for perceived Career Barriers (CB) and Coping self-efficacy with perceived Career Barriers (CC) was non-significant for Hmong

American male college students (B = .19, p > .05), Hmong American female college students (B = -.23, p > .05), Caucasian American male college students (B = .51, p > .05) and Caucasian American female college students (B = -.15, p > .05).

Table 44.
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Coping with Perceived Educational Barriers on the Relation between Perceived Educational Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1																
CEB	-.08	.18	-.05	.00	-.12	.25	-.06	.00	-.40	.19	-.18*	.03*	-.09	.30	-.04	.00
Step 2																
CEB	-.06	.21	-.03	.00	.08	.27	.04	.04	-.40	.21	-.18*	.00	.00	.28	.00	.15**
CEC	.05	.21	.03		.45	.26	.22		-.01	.17	-.01		.84	.26	.39**	
Step 3																
CEB	-.12	.22	-.07	.01	.08	.27	.04	.00	-.42	.21	-.19*	.01	-.06	.34	-.03	.00
CEC	.11	.22	.06		.44	.28	.21		-.10	.19	-.06		.96	.46	.46*	
CEBxCEC	-.23	.26	-.10		.00	.36	.00		-.32	.30	-.10		.22	.64	.08	

**Significant at the 0.01 level *Significant at the 0.05 level

CEB = Perceived Educational Barriers, CEC = Coping Self-Efficacy with Perceived Educational Barriers, CEBxCEC= Interaction Term

Table 45.
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Coping with Perceived Career Barriers on the Relation between Perceived Career Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1																
CCB	-.03	.17	-.02	.00	-.11	.19	-.07	.00	-.28	.14	-.17*	.03*	-.15	.24	-.08	.01
Step 2																
CCB	.01	.17	.00	.01	-.12	.19	-.07	.00	-.29	.14	-.18*	.00	-.12	.24	-.07	.04
CCC	.12	.17	.07		.05	.17	.03		-.08	.13	-.05		.24	.15	.20	
Step 3																
CCB	.01	.17	.01	.01	-.09	.19	-.05	.02	-.28	.14	-.17*	.01	-.35	.27	-.19	.05
CCC	.28	.23	.16		.09	.18	.06		.04	.17	.02		.72	.31	.62*	
CCBxCCC	-.23	.21	-.14		.19	.15	.15		.15	.16	.11		.51	.28	.49	

**Significant at the 0.01 level *Significant at the 0.05 level

CCB = Perceived Career Barriers, CCC = Coping Self-Efficacy with Perceived Career Barriers, CCBxCCC = Interaction Term

This study proposed that Coping self-efficacy with perceived Educational Barriers (EC) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD). Results were non-significant for the total sample. The interaction term for perceived Educational Barriers (EB) and Coping self-efficacy with perceived Educational Barriers (EC) was non-significant (B = -.17, p > .05). A non-significant moderator effect also was found for the hypothesized moderator, Coping self-efficacy with perceived Career Barriers (CC), on the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for the total sample. In other words, examination of the interaction term for perceived Career Barriers (CB) and Coping self-efficacy with perceived Career Barriers (CC) was non-significant (B = .09, p > .05).

Table 46.
Testing Moderator Effect of Coping self-efficacy with perceived Educational Barriers (EC) on the Relation between Perceived Educational Barriers (EB) and Career Decidedness (CD) for Total Sample

	B	*SE B*	β	ΔR^2
Step 1				
CEB	-.09	.15	-.05	.02**
Step 2				
CEB	.01	.16	.04	.01*
CEC	.23	.16	.12	
Step 3				.00
CEB	-.19	.11	.00	
CEC	.21	.11	.14*	
CEBxCEC	-.17	.24	-.05	.02

**Significant at the 0.01 level *Significant at the 0.05 level

CEB = Perceived Educational Barriers, CEC = Coping Self-Efficacy with Perceived Educational Barriers, CEBxCEC= Interaction Term

Table 47.
Testing Moderator Effect of Coping self-efficacy with perceived Career Barriers (CC) on the Relation between Perceived Career Barriers (CB) and Career Decidedness (CD) for Total Sample

	B	*SE B*	β	ΔR^2
Step 1				
CCB	-.21	.07	-.15**	.02**
Step 2				
CCB	-.19	.07	-.14**	.00
CCC	.08	.08	.05	
Step 3				
CCB	-.19	.07	-.14**	.00
CCC	.11	.08	.07	
CCBxCCC	.09	.07	.07	

**Significant at the 0.01 level *Significant at the 0.05 level

CCB = Perceived Career Barriers, CCC = Coping Self-Efficacy with Perceived Career Barriers, CCBxCCC = Interaction Term

Additional Moderator Data Analyses. Hierarchical linear regression analyses also were used to examine other moderator effects. Figures 3 through 10 illustrate the following testable moderator hypotheses that were conducted for each group (e.g., Hmong American female college students, Hmong American male college students, Caucasian American female college students, Caucasian American male college students).

a) Positive Affect (PA) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD)
b) Positive Affect (PA)would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD)
c) Negative Affect (NA) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD)
d) Negative Affect (NA)would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD)
e) Optimism (OPT) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD)
f) Optimism (OPT) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD)
g) Pessimism (PESS) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD)
h) Pessimism (PESS) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD)

The method of testing the significance of moderator effects was followed according to Frazier and colleagues (2004). Results are presented in Tables 31 through 38.

Positive Affect (PA) was hypothesized to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD). Results indicated a significant relation for Caucasian American male college students. The unstandardized regression coefficient for the centered perceived Educational Barrier (EB) was -.09, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the centered Positive Affect (PA) was -.01, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the interaction term was .71, $\underline{p} < .05$ which was significant. The R^2 change associated with the interaction term was .08, $\underline{p} < .05$. In other words, the interaction between Positive Affect (PA) and perceived Educational Barriers (EB) explained 8% more than the first-order effects of Positive Affect (PA) and perceived Educational Barriers (EB) for Caucasian American male college students. Results were non-significant for Hmong American female college students, Hmong American male college students and Caucasian American female college students.

Non-significant moderator effects were found for the hypotheses that Positive Affect (PA) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD) for all groups. Examination of the interaction terms were non-significant for Hmong American female college students ($B = .05$, $\underline{p} > .05$), Hmong American male college students ($B = -.06$, $\underline{p} > .05$), Caucasian American female college students ($B = .06$, $\underline{p} > .05$) and Caucasian American male college students ($B = -.35$, $\underline{p} > .05$).

Table 48.

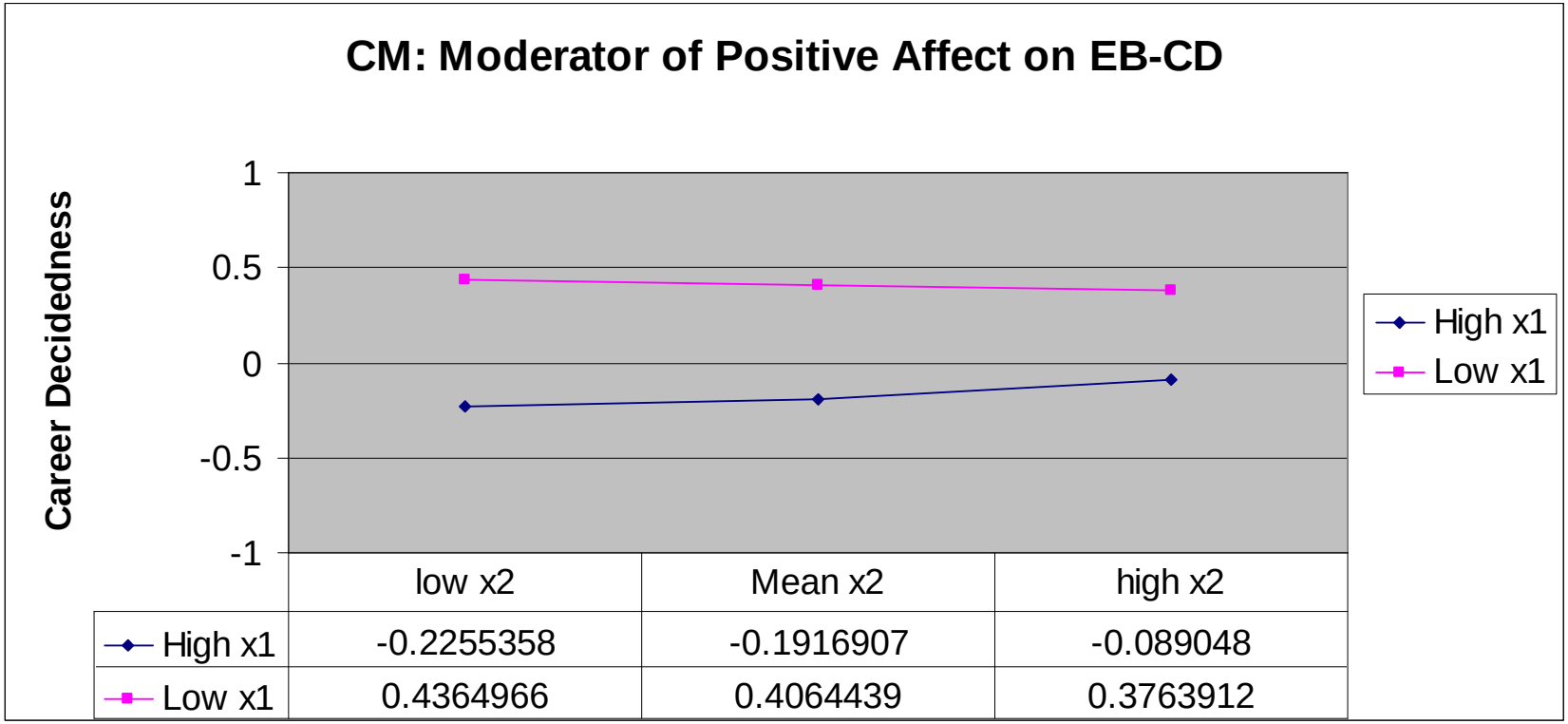
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Positive Affect on the Relation between Perceived Educational Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	B	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.09	.15			-.24	.18			.03	.12		.03*	.20	.20		
CEB	-.08	.18	-.05	.00	-.12	.25	-.06	.00	-.40*	.19	-.18		-.09	.30	-.04	.00
Step 2	-.08	.15			-.36*	.17			.15	.11		.19**	.20	.21		
CEB	-.03	.18	-.02	.03	.07	.24	.03	.14**	-.06	.18	-.03		-.09	.31	-.04	.00
CPA	.29	.15	.19		.74**	.21	.38		.85**	.15	.46		-.01	.19	-.01	
Step 3	-.08	.14			-.36*	.18			.13	.11		.00	.18	.20		
CEB	-.23	.22	-.12	.03	.07	.25	.03	.00	-.03	.19	-.02		-.36	.32	-.16	.08*
CPA	.27	.15	.18		.74**	.24	.39		.85**	.15	.46		-.01	.18	-.00	
CPAXCEB	.29	.17	.20		-.01	.35	-.00		.15	.20	.06		-.71*	.32	-.31	

**Significant at the 0.01 level* Significant at the 0.05 level

CEB = Centered Perceived Educational Barriers, CPA = Centered Positive Affect, CPAxCEB = Interaction Term

Figure 1.
Simple Slopes for Testing Moderator Effect of Positive Affect on the Relation between Perceived Educational Barriers and Career Decidedness for Caucasian American Male College Students



	low x2	Mean x2	high x2
High x1	-0.2255358	-0.1916907	-0.089048
Low x1	0.4364966	0.4064439	0.3763912

Table 49.

Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Positive Affect on the Relation between Perceived Career Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.12	.16			-.25	.18			.07	.11			.12	.24		
CCB	-.03	.17	-.02	.00	-.11	.19	-.07	.00	-.28*	.14	-.17	.03*	-.15	.24	-.08	.01
Step 2	-.07	.16			-.32	.17			.09	.09			.12	.24		
CCB	-.04	.16	-.02	.04*	-.05	.18	-.03	.14**	-.27*	.12	-.17	.22**	-.15	.24	-.08	.00
CPA	.29*	.15	.19		.72	.21	.37		.86**	.14	.47		-.01	.19	-.00	
Step 3	-.07	.16			-.31	.17			.08	.10			.12	.24		
CCB	-.07	.18	-.04	.00	-.04	.19	-.02	.00	-.26*	.13	-.16	.00	-.27	.25	-.15	.04
CPA	.29*	.15	.19		.74	.23	.39		.86**	.14	.46		-.04	.19	-.03	
CPAXCCB	.05	.15	.04		-.06	.19	-.04		.06	.15	.03		-.35	.23	-.21	

**Significant at the 0.01 level* Significant at the 0.05 level

CCB = Centered Perceived Career Barriers, CPA = Centered Positive Affect, CPAxCCB = Interaction Term

Negative Affect (NA) was hypothesized to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD). Results indicated a significant relation for Hmong American female college students. The unstandardized regression coefficient for the centered perceived Educational Barrier (EB) was -.08, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the centered Negative Affect (NA) was .06, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the interaction term was .42, $\underline{p} < .05$ which was significant. The R^2 change associated with the interaction term was .05, $\underline{p} < .05$. In other words, the interaction between Negative Affect (NA) and perceived Educational Barriers (EB) explained 5% more than the first-order effects of Negative Affect (NA) and perceived Educational Barriers (EB) for Caucasian American male college students. Other results were non-significant for Hmong American male college students ($B = .56$, $\underline{p} > .05$), Caucasian American male college students ($B = -.31$, $\underline{p} > .05$) and Caucasian American female college students ($B = -.42$, $\underline{p} > .05$).

Non-significant moderator effects were found for the hypotheses that Negative Affect (NA) would moderate the relation between perceived Career Barriers (CB)and Career Decidedness (CD) for all groups. Examination of the interaction terms were non-significant for Hmong American male college students ($B = .23$, $\underline{p} > .05$), Hmong American female college students ($B = .17$, $\underline{p} > .05$), Caucasian American male college students ($B = .09$, $\underline{p} > .05$) and Caucasian American female college students ($B = .22$, $\underline{p} > .05$).

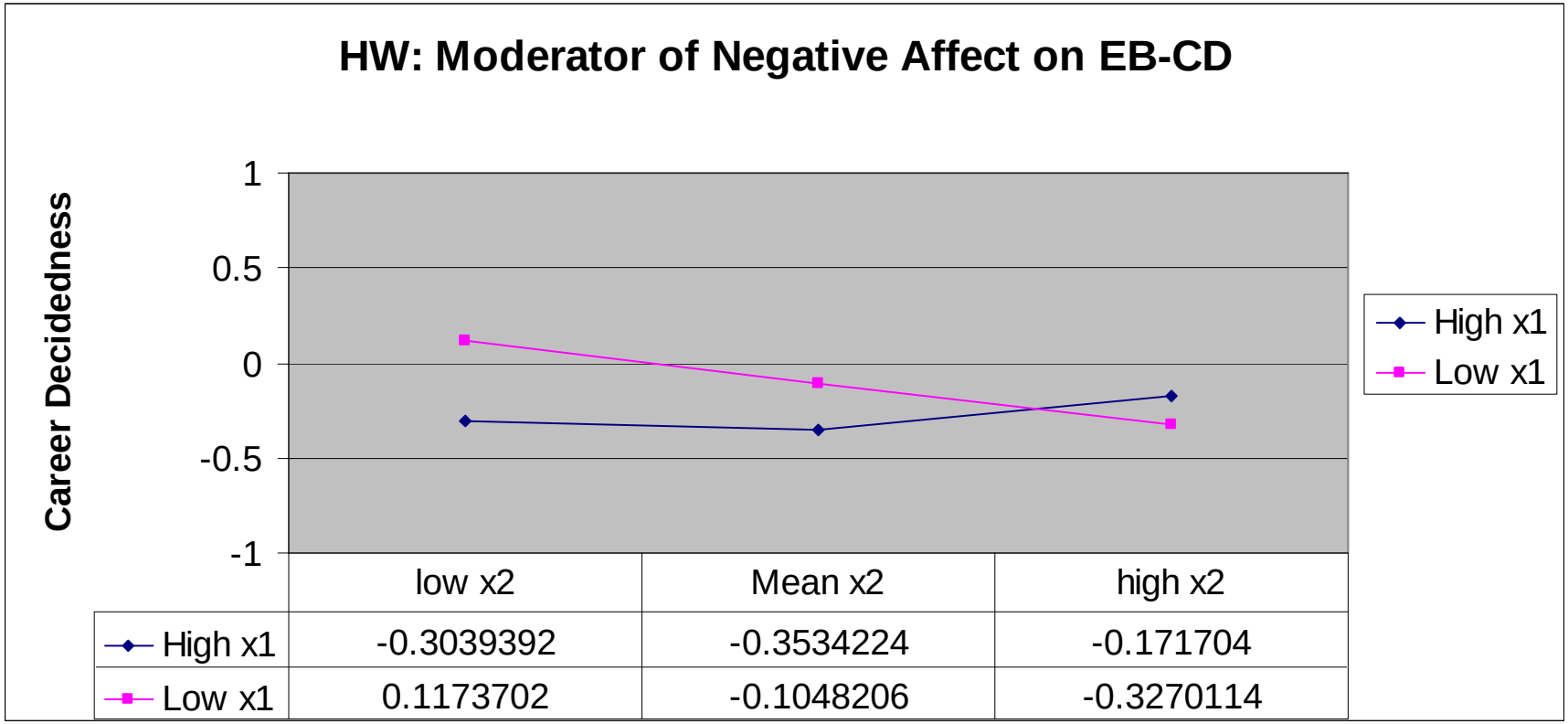
Table 50.
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Negative Affect on the Relation between Perceived Educational Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.09	.15			-.24	.18			.03	.12			.20	.20		
CEB	-.08	.18	-.05	.00	-.12	.25	-.06	.00	-.40	.19	.18*	.03*	-.09	.30	-.04	.00
Step 2	-.09	.15			-.23	.19			.03	.12			.35	.21		
CEB	-.05	.20	-.03	.00	-.07	.27	-.03	.00	-.43	.20	-.19*	.00	-.08	.29	-.03	.07*
CAN	.06	.17	-.04		-.12	.25	-.06		.06	.14	.04		.43	.21	.26*	
Step 3	-.10	.15			-.34	.20			.00	.12			.22	.25		
CEB	-.25	.22	-.13	.05*	-.12	.27	-.06	.03	-.42	.20	-.19*	.01	-.31	.37	-.13	.02
CAN	-.26	.19	-.16		-.25	.25	-.13		.11	.15	.07		.10	.38	.06	
CNAXCEB	.42	.19	.29*		.56	.35	.19		.21	.24	.08		-.58	.57	-.25	

**Significant at the 0.01 level* Significant at the 0.05 level

CEB = Centered Perceived Educational Barriers, CNA = Centered Negative Affect, CNAxCEB = Interaction Term

Figure 2.
Simple Slopes for Testing Moderator Effect of Negative Affect on the Relation between Perceived Educational Barriers and Career Decidedness for Hmong American Female College Students



	low x2	Mean x2	high x2
High x1	-0.3039392	-0.3534224	-0.171704
Low x1	0.1173702	-0.1048206	-0.3270114

Table 51.
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Negative Affect on the Relation between Perceived Career Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.12	.16			-.25	.18			.07	.11			.12	.24		
CCB	-.03	.17	-.02	.00	-.11	.19	-.07	.00	-.28	.14	=.17*	.03*	-.15	.24	-.08	.01
Step 2	-.12	.16			-.23.	.18			.07	.11			.31	.25		
CCB	.00	.18	.00	.00	-.09	.19	-.05	.00	-.28	.14	-.17*	.00	.09	.24	-.05	.06*
CNA	-.08	.17	-.05		-.13	.23	-.07		.00	.13	.00		.42	.21	.25*	
Step 3	-.12	.16			-.25	.18			.06	.11			.34	.29		
CCB	-.04	.18	-.02	.01	-.11	.20	-.06	.02	-.25	.14	-.15	.01	-.06	.29	-.03	.00
CNA	-.19	.21	-.12		-.21	.24	-.11		.05	.14	.03		.48	.38	.29	
CNAXCCB	.17	.19	.12		.23	.19	.14		.22	.18	.11		.09	.41	.05	

**Significant at the 0.01 level* Significant at the 0.05 level

CCB = Centered Perceived Career Barriers, CNA = Centered Negative Affect, CNAxCCB = Interaction Term

Investigation of the hypotheses that Optimism (OPT) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) was significant for Hmong American female college students and Caucasian American male college students. Results were non-significant for Hmong American male college students and Caucasian American female college students.

The unstandardized regression coefficient for the centered perceived Educational Barrier (EB) was -.08, $\underline{p} > .05$ for Hmong American female college students and -.09, $\underline{p} > .05$ for Caucasian American male college students which were non-significant for both groups. The unstandardized regression coefficient for the centered Optimism (OPT) was .28, $\underline{p} > .05$ for Hmong American female college students and -.15, $\underline{p} > .05$ for Caucasian American male college students which also were non-significant for both groups. The unstandardized regression coefficient for the interaction term was .35, $\underline{p} < .05$ for Hmong American female college students and -.69, $\underline{p} < .05$ for Caucasian American male college students which were significant for both groups. The R^2 change associated with the interaction term was .04, $\underline{p} < .05$ for Hmong American female college students and .08, $\underline{p} < .05$ for Caucasian American male college students. In other words, the interaction between Optimism (OPT) and perceived Educational Barriers (EB) explained 4% more than the first-order effects of Optimism (OPT) and perceived Educational Barriers (EB) for Hmong American female college students. The interaction between Optimism (OPT) and perceived Educational Barriers (EB) explained 8% more than the first-order effects of Optimism (OPT) and perceived Educational Barriers (EB) for Hmong American female college students.

The hypotheses that Optimism (OPT) would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD) was non-significant for all groups. Interaction terms were non-significant for Hmong American female college students (B = -11, p >.05), Hmong American male college students (B = .17, p > .05), and Caucasian American female college students (B = .09, p > .05).Caucasian American male college students (B = -.34, p > .05).

Table 52.

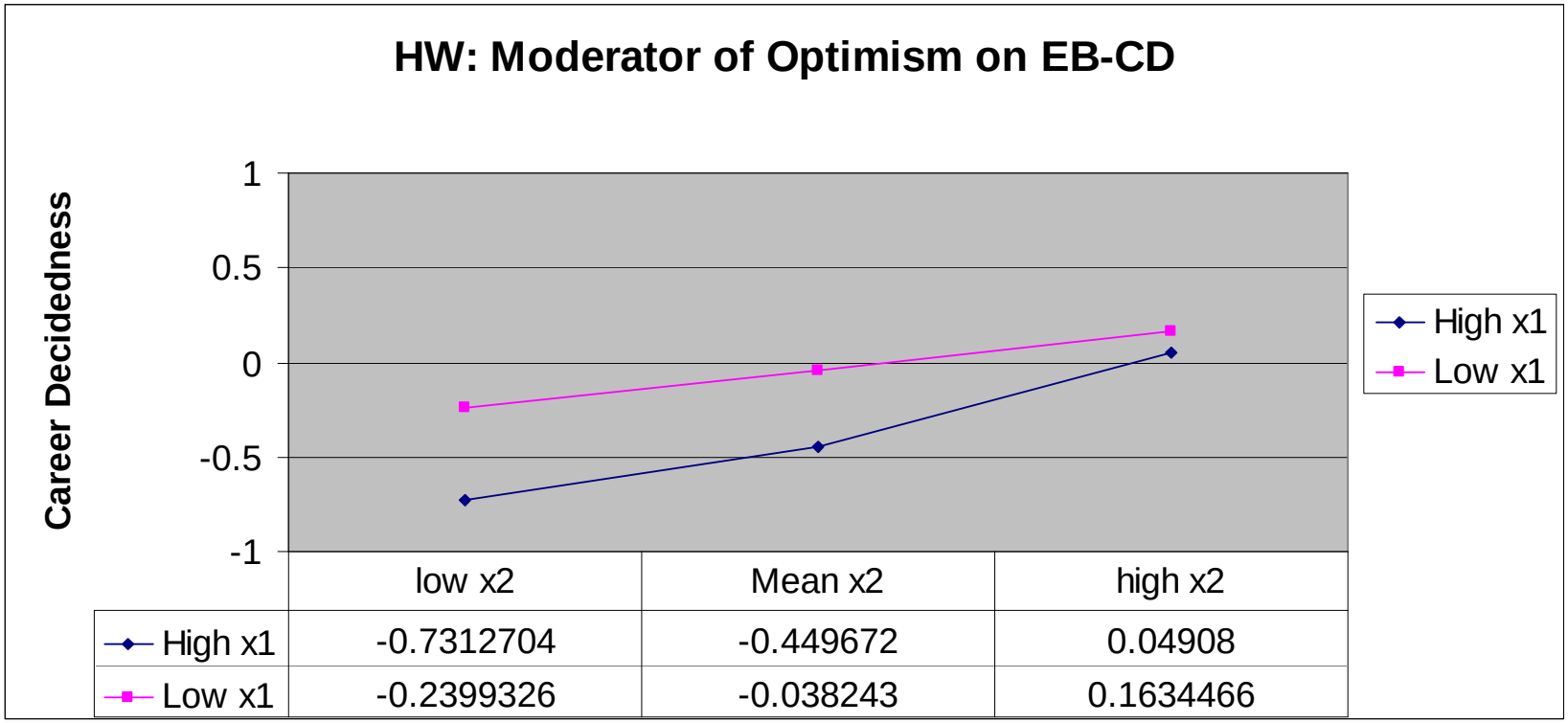
Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Optimism on the Relation between Perceived Educational Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.09	.15			-.24	.18			.03	.12			.20	.20		
CEB	-.08	.18	-.05	.00	-.12	.25	-.06	.00	-.40*	.19	-.18	.03*	-.09	.30	-.04	.00
Step 2	-.12	.15			-.33	.18			.19	.12			.18	.20		
CEB	-.07	.18	-.04	.02	-.05	.24	-.02	.09**	-.16	.19	-.07	.11**	-.15	.32	-.07	.01
COPT	.28	.19	.14		.59**	.22	.30		.57**	.13	.36		-.15	.22	-.09	
Step 3	-.12	.15			-.44*	.19			.18	.12			.17	.20		
CEB	-.30	.21	-.16	.04*	-.14	.24	-.07	.03	-.15	.19	-.07	.00	-.41	.33	-.18	.08*
COPT	.34	.19	.17		.61**	.21	.32		.56**	.13	.35		-.12	.22	-.07	
COPTXCEB	.35*	.17	.24		.52	.32	.18		.05	.21	.02		-.69*	.32	-.31	

**Significant at the 0.01 level* Significant at the 0.05 level

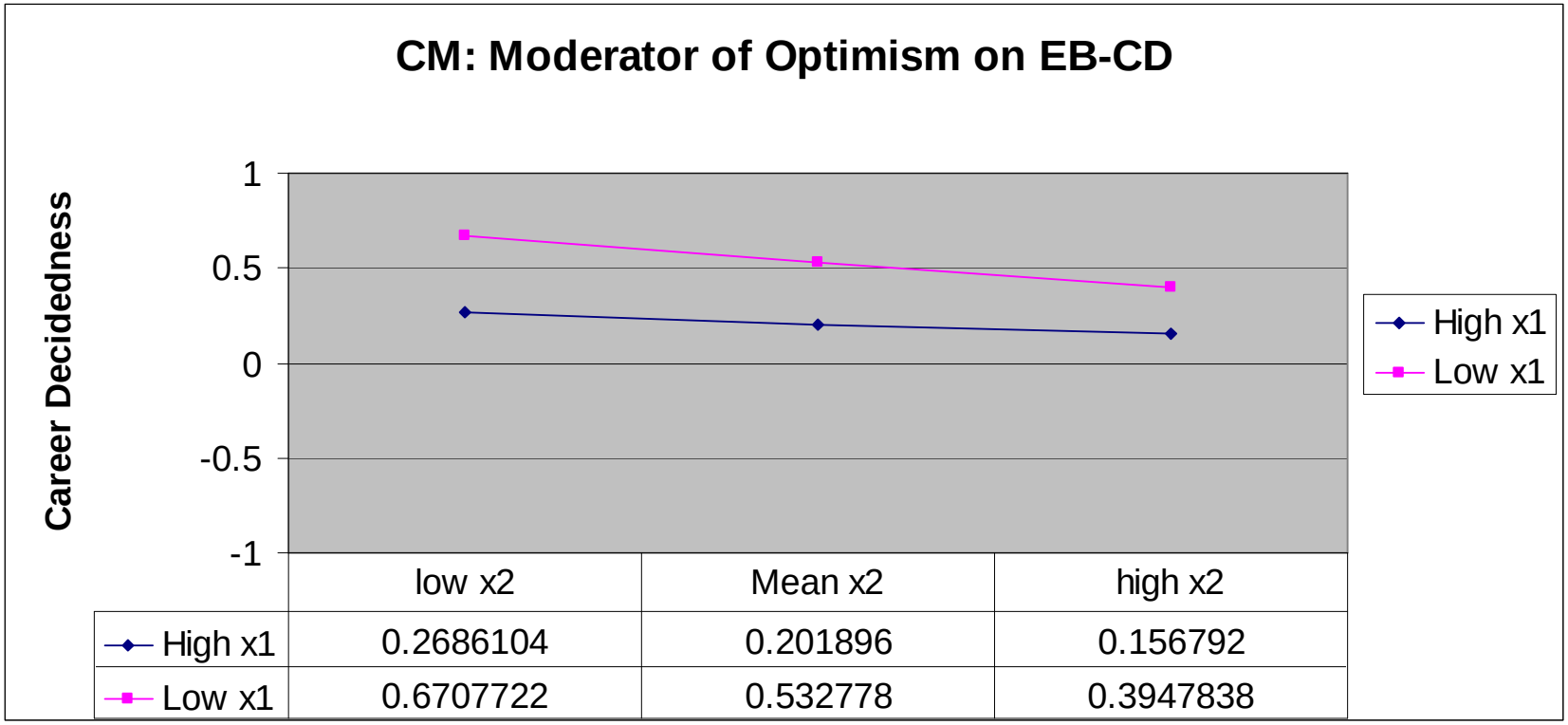
CEB = Centered Perceived Educational Barriers, COPT = Centered Optimism, COPTXCEB = Interaction Term

Figure 3.
Simple Slopes for Testing Moderator Effect of Optimism on the Relation between Perceived Educational Barriers and Career Decidedness for Hmong American Female College Students



	low x2	Mean x2	high x2
High x1	-0.7312704	-0.449672	0.04908
Low x1	-0.2399326	-0.038243	0.1634466

Figure 4.
Simple Slopes for Testing Moderator Effect of Optimism on the Relation between Perceived Educational Barriers and Career Decidedness for Caucasian American Male College Students



	low x2	Mean x2	high x2
High x1	0.2686104	0.201896	0.156792
Low x1	0.6707722	0.532778	0.3947838

Table 53.

Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Optimism on the Relation between Perceived Career Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.12	.16			-.25	.18			.07	.11			.12	.24		
CCB	-.03	.17	-.02	.00	-.11	.19	-.07	.00	-.28*	.14	-.17	.03*	-.15	.24	-.08	.01
Step 2	-.12	.16			-.32	.17			.19	.10			.15	.25		
CCB	-.05	.17	-.03	.02	-.11	.19	-.06	.09**	-.16	.13	-.10	.12**	-.12	.25	-.07	.00
COPT	.29	.19	.15		.59**	.21	.31		.57**	.13	.36		-.10	.22	-.06	
Step 3	-.12	.16			-.34	.17			.18	.11			.12	.25		
CCB	-.10	.18	-.06	.01	-.13	.19	-.08	.01	-.15	.14	-.09	.00	-.26	.26	-.14	.03
COPT	.32	.20	.17		.59**	.21	.30		.56**	.13	.35		-.02	.23	-.01	
COPTXCCB	.11	.16	.08		.17	.18	.10		.09	.16	.05		-.34	.24	-.20	

**Significant at the 0.01 level* Significant at the 0.05 level

CCB = Centered Perceived Career Barriers, COPT = Centered Optimism, COPTXCCB = Interaction Term

Data indicated significant results for the hypotheses that Pessimism (PESS) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for Caucasian American male college students. The unstandardized regression coefficient for the centered perceived Educational Barrier (EB) was -.09, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the centered Pessimism (PESS) was .05, $\underline{p} > .05$ which was not significant. The unstandardized regression coefficient for the interaction term was -.71, $\underline{p} < .05$ which was significant. The R^2 change associated with the interaction term was .08, $\underline{p} < .05$. In other words, the interaction between Pessimism (PESS) and perceived Educational Barriers (CB) explained 8% more than the first-order effects of Pessimism (PESS) and perceived Educational Barriers (CB) for Caucasian American male college students. Results were non-significant for Hmong American male college students, Hmong American female college students and Caucasian American female college students.

Non-significant moderator effects were found for the hypotheses that Pessimism (PESS) would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD) for all groups. Examination of the interaction terms were non-significant for Hmong American female college students (B = -.11, $\underline{p} > .05$), Hmong American male college students (B = .15, $\underline{p} > .05$), Caucasian American female college students (B = .13, $\underline{p} > .05$) and Caucasian American male college students (B = -.35, $\underline{p} > .05$).

Table 54.

Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Pessimism on the Relation between Perceived Educational Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step 1	-.09	.15			-.24	.18			.03	.12			.20	.20		
CEB	-.08	.18	-.05	.00	-.12	.25	-.06	.00	-.40*	.19	-.18	.03*	-.09	.30	-.04	.00
Step 2	-.09	.15			-.28	.19			.033	.12			.19	.20		
CEB	.02	.20	.01	.02	-.21	.26	-.10	.01	-.30	.20	-.13	.02	-.13	.34	-.05	.00
CPESS	-.30	.20	-.16		.23	.26	.11		-.18	.12	-.13		.05	.22	.03	
Step 3	-.10	.15			-.34	.20			.02	.12			.18	.20		
CEB	-.19	.23	-.10	.03	-.24	.26	-.11	.02	-.29	.21	-.13	.00	-.40	.35	-.18	.08*
CPESS	-.29	.20	-.15		.12	.28	.06		-.17	.12	-.12		.06	.21	.04	
CPESSXCEB	.29	.17	.20		.40	.36	.14		.10	.22	.04		-.71*	.32	-.31	

**Significant at the 0.01 level* Significant at the 0.05 level

CEB = Centered Perceived Educational Barriers, CPESS = Centered Pessimism, CPESSXCEB = Interaction Term

Figure 5.
Simple Slopes for Testing Moderator Effect of Pessimism on the Relation between Perceived Educational Barriers and Career Decidedness for Caucasian American Male College Students

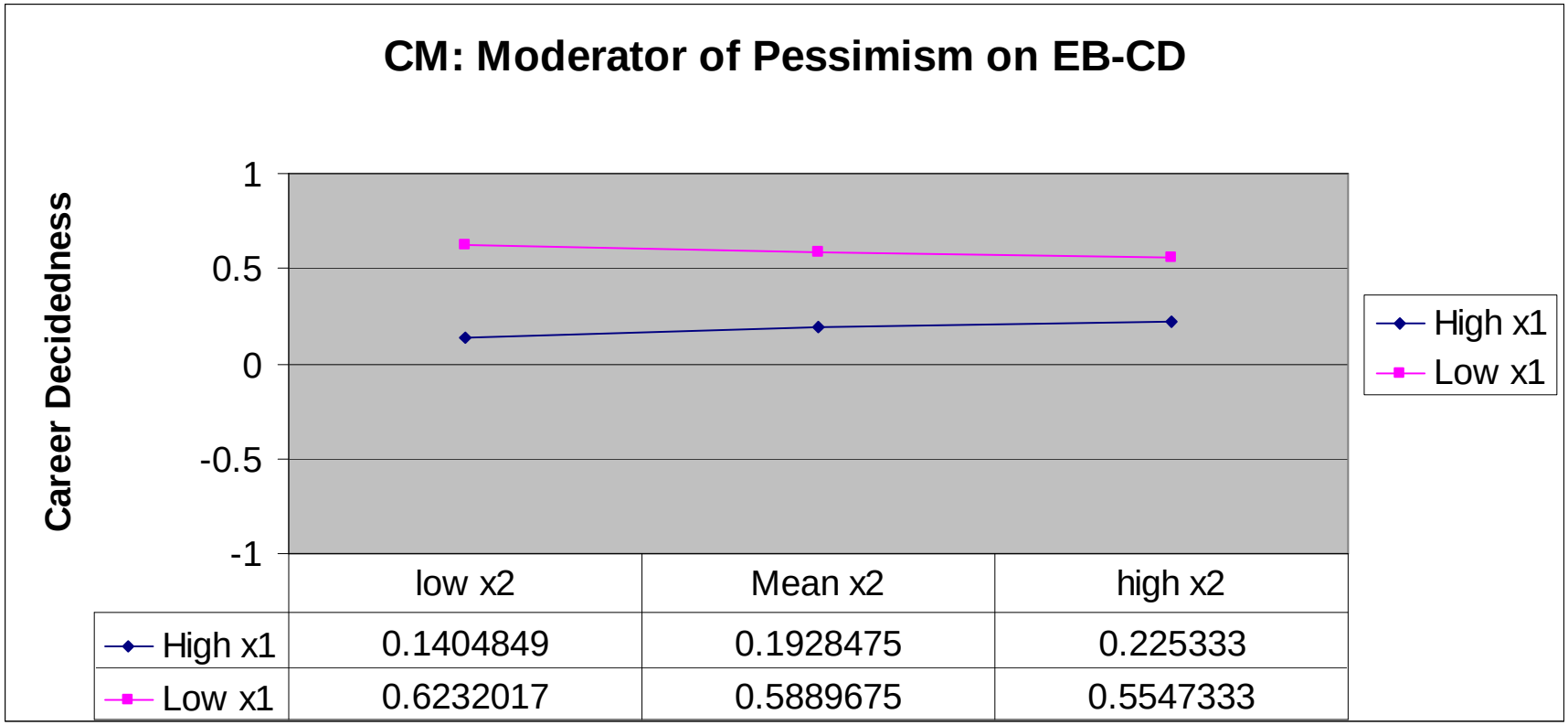


Table 55.

Sex and Race/Ethnic Comparisons: Testing Moderator Effect of Pessimism on the Relation between Perceived Career Barriers and Career Decidedness

	Hmong Women				Hmong Men				Caucasian Women				Caucasian Men			
	B	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2	*B*	*SE B*	β	ΔR^2
Step1	-.12	.16			-.25	.18			.07	.11			.12	.24		
CCB	-.03	.17	-.02	.00	-.11	.19	-.07	.00	-.28*	.14	-.17	.03*	-.15	.24	-.08	.01
Step 2	-.06	.16			-.29	.18			.04	.11			.13	.25		
CCB	-.04	.17	-.02	.02	-.14	.20	-.08	.01	-.26	.14	-.16	.03	-.15	.24	-.08	.00
CPESS	-.30	.19	-.16		.19	.25	.09		-.22	.11	-.16		.02	.20	.02	
Step 3	-.06	.16			-.30	.19			.04	.11			.11	.24		
CCB	-.09	.18	-.05	.01	-.16	.20	-.10	.01	-.24	.14	-.14	.00	-.27	.25	-.14	.04
CPESS	-.32	.19	-.17		.15	.26	.07		-.20	.12	-.15		-.03	.20	-.02	
CPESSXCCB	.11	.15	.07		.15	.20	.09		.13	.17	.07		-.35	.24	-.21	

**Significant at the 0.01 level* Significant at the 0.05 level

CCB = Centered Perceived Career Barriers, CPESS = Centered Pessimism, CPESSXCCB = Interaction Term

CHAPTER 4

Discussion

Career development research that has investigated contextual factors and individual traits among minority group members has found that women and ethnic minority students reported more perceived barriers, less support (e.g., family support) and lower confidence (e.g., career decision-making self-efficacy) than did non-minority group members in their career choice process (e.g., Luzzo & McWhirter, 2001; Tang et al., 1999). Despite results indicating that minority group members reported more perceived barriers and less support than did non-minority group members, less information is known about how both sets of variables affect the career development of smaller and more recent refugee immigrant groups such as Hmong Americans. The primary purpose of this study was to investigate how contextual factors (i.e., perceived career barriers, perceived educational barriers, family support and role models) and individual traits (i.e., positive and negative affect, optimism, and self-efficacy beliefs) relate to career outcomes (e.g., career decidedness) in a sample of Hmong American college students. These results were compared to a Caucasian American college student sample to investigate sex and racial/ethnic group differences.

Comparisons for Demographic Characteristics

Investigations of race/ethnic and sex comparisons in regards to the sample's demographic characteristics (i.e., age, GPA, first generation college student status, SES, income, education level completed by father and mother) generated several significant differences. Compared to Caucasian American college students, Hmong American college students reported lower GPA's, were more likely to be first generation college

students, reported lower SES and income, and lower education levels completed by father and mother, which also have been documented by others (e.g., Pope, 2008). Moreover, some researchers (e.g., Leong, 1995) have argued that because of these significant and large differences between minority and majority groups, group comparisons should report these differences and discuss results within these parameters. For example, some authors (e.g., Lee and Green, 2008) continue to note that SES and parental income have an impact on career development and educational achievement.

Comparisons of Correlation Results

Investigations of individual traits and career decidedness yielded some unexpected results. Although previous authors have suggested a relation between enthusiasm and happiness (i.e., positive affect) and career decidedness (Schmidt, 2003), and optimism and positive career outcomes (Rottinghaus et al., 2005), optimism and positive affect were found to be significantly positively related to career decidedness for Caucasian American female college students and Hmong American male college students. Moreover, the relation between pessimism and career decidedness was only significant for Caucasian American female college students. These results suggest that the relation between dispositional characteristics and career decidedness might vary by sex or race/ethnic group membership.

Comparisons of MANOVA Results

The investigation of race/ethnic and sex comparisons among Hmong American and Caucasian American college students in regards to specific career development variables yielded some noteworthy similarities and differences from previous research. Racial and ethnic comparisons found that Hmong American college students reported

higher rates of perceived barriers with less resources (e.g., career decision-making self-efficacy, family support); whereas, Caucasian American male college students reported the least number of perceived barriers, highest degrees of support, self-efficacy beliefs and career decidedness. Previous studies that have compared majority and minority groups also have found similar patterns (e.g., Lopez & Ann-Yi, 2006, Luzzo & McWhirter, 2001).

Sex comparisons among Caucasian American college students found significant sex differences consistent with previous results that women reported more perceived educational and career barriers than did men (e.g., Luzzo, 1993; Luzzo & Hutcheson, 1996; Luzzo & McWhirter, 2001; Weiss, 2000). Caucasian American female college students also reported a significantly lower level of career decision-making self-efficacy. Because career decision-making self-efficacy also was found to be significantly related to career decidedness for Caucasian American female college students, these results suggest that low confidence in Caucasian American female college students' career decision-making skills could affect their career decisions.

Compared to Caucasian American college students, Hmong American college students reported the largest number of perceived barriers, and lowest levels of support, self-efficacy beliefs and career decidedness. Unlike Caucasian American college students, sex comparisons among Hmong American college students yielded some mixed sex findings and unexpected results. Hmong American female college students reported the highest rates of contextual barriers (i.e., perceived educational and career barriers), lowest self-efficacy beliefs in regards to coping with educational barriers and career

decision-making (i.e., coping self-efficacy with perceived educational barriers and career decision-making self-efficacy).

Although results indicated a significant sex-difference among Hmong American college students for role model Support and Guidance (S/G), this finding was in the unexpected direction. Hmong American female college students reported more role model Support and Guidance (S/G), than did their male counterparts. This finding might suggest that Hmong American female college students who do not have significant role model support and guidance might be less likely to persist to the college level. It is plausible that Hmong American female college students with less role model support either do not pursue college or else discontinued their college experience much earlier. In other words, Hmong American women who enroll in college might be a select group of women within the Hmong American community who have role models or are able to access role models. Future studies could examine how the presence or absence of role models might differentially affect the career choice process for Hmong American men and women.

Comparisons of Hierarchical Multiple Regression Results

Family support (FAM) and role model Inspiration/Modeling (I/M) were found to predict Career Decidedness (CD) for Hmong American female college students and Caucasian American female college students. Only Coping self-efficacy with perceived Educational Barriers (EC) was found to predict Career Decidedness (CD) for Caucasian American male college students. None of the expected predictors significantly predicted Career Decidedness (CD) for Hmong American male college students. These results

suggest that Family support (FAM) might be an important predictor for Career Decidedness (CD) for female college students.

For Career Decision-making Self-Efficacy (CDSE), several significant predictors emerged for each group. Perceived Educational Barriers (EB) and role model Inspiration/Modeling (I/M) significantly predicted Career Decision-making Self-Efficacy for Hmong American female college students. For Hmong American male college students, significant predictors included family support (FAM), role model Support/Guidance (S/G) and Coping self-efficacy with perceived Educational Barriers (EC). Family support (FAM), role model Support/Guidance (S/G) and Coping self-efficacy with perceived Educational Barriers (EC) were significant predictors for Caucasian American female college students. For Caucasian American male college students, perceived Educational Barriers (EB), Family support (FAM), role model Support/Guidance (S/G) and Coping self-efficacy with perceived Educational Barriers (EC) were significant predictors for Career Decision-making Self-Efficacy (CDSE). These results suggest that Coping self-efficacy with perceived Educational Barriers (EC) might be an important predictor for Career Decision-making Self-Efficacy (CDSE) for male college students.

Comparisons of Moderator Results

No evidence was found to support the two proposed moderating effects [i.e., Coping self-efficacy with perceived Educational Barriers (EC) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD), and Coping self-efficacy with Career Barriers would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD)] despite suggestions from previous

authors (e.g., Lent et. al, 2001) and prior findings (e.g., VilaCruz, 2003). In other words, the assumption that Coping self-efficacy might reduce the effects of perceived barriers on career variables such as career decidedness was not supported. The non-significant results might have been affected by the characteristics of this sample. For example, this sample was less likely to report perceived career barriers and more likely to report higher rates of coping self-efficacy.

Results from this study indicated that Positive Affect (PA) and Pessimism did moderate the relations between perceived Educational Barriers (EB) and Career Decidedness (CD) for Caucasian American male college students. Negative Affect (NA) was found to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for Hmong American female college students. Optimism also was found to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for Hmong American female college students and Caucasian American male college students.

Summary of Results

The results of this study indicated statistically significant race/ethnic and sex differences in regards to contextual factors and individual traits among a sample of Hmong American and Caucasian American college students, which supports the current assumption that students from minority groups might experience more obstacles to their educational and career goals than do students from majority groups. For example, this study found significant race and ethnic differences for perceived career barriers. Moreover, examining the relations among these career variables for other sex and

race/ethnic groups to determine whether these results are consistent across marginalized groups or applicable only to specific group is recommended.

These results also provide evidence to support previous research (e.g., Choi et al., 2007, Lopez & Ann-Yi, 2006, VilaCruz, 2003) that has compared the career development process of women and racial and ethnic minority group members and found that the relations among career variables might vary depending on race/ethnic and sex group membership. For example, this study showed that the relation between perceived Career Barriers (CB) and Coping self-efficacy with Career Barriers (CC) was only significant for Hmong American female college students. Lopez and Ann-Yi (2006) only found this significant relation between perceived Career Barriers (CB) and Coping self-efficacy with Career Barriers (CC) for an African American female college student sample. Future studies could investigate how the relations between career variables are affected by cultural variables such as gender role identity, ethnic identity and acculturation.

Implications for Research on the Career Development of Hmong Americans

Studies that have researched the educational/vocational behaviors of Hmong Americans have generally focused on educational achievement (e.g., Lee, 2008; Lee & Green, 2008) and/or negative factors such as barriers (e.g., Moua, 2007; Vue, 2007) to educational achievement. For example, Lee and Green (2008) explored the role of parental involvement and support in educational achievement. These authors found that children of parents who reported higher levels of involvement and support in their children's educational achievement also showed higher levels of educational achievement (i.e., achieved higher grades in their courses). Furthermore, these educational/vocational studies have rarely examined contextual factors and dispositional characteristics in

regards to career choices. The results of this study suggest that the presence of role models appears to be a significant predictor for career decision-making self-efficacy and career decidedness among Hmong American female college students. The contributions of role models is an important area to explore since other authors (e.g., Thao, 2009) have documented the discrepancy between the educational levels of parents and their children and how this discrepancy can contribute to a lack of knowledge and therefore, assistance in the areas educational achievement and career choice.

Implications for Using Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) highlights the interplay among a number of *cognitive variables* (i.e., self-efficacy, outcome expectations, and personal goals), *person factors* (e.g., gender, ethnicity, social support, perceived barriers), *contextual variables* (e.g., discrimination, barriers, supports), and *self-efficacy beliefs* that might influence an individual's choice in career development (Lent et al., 1994; 2000). Contextual factors and dispositional traits were investigated in this study to determine the influences of these variables on the career development of Hmong American and Caucasian American college students. Results generally suggest that SCCT is a useful framework from which to further investigate the career development of Hmong American college students. However, results from this study do suggest that factors within the SCCT framework might differentially affect the career choice variables of Hmong American and Caucasian American college students. For example, Family Support (FAM) and Role Model Inspiration/Modeling (I/M) appear to be significant predictors for Career Decidedness (CD) among Hmong American and Caucasian American female college students and Coping with Educational Barriers (EC) appears to be a significant

predictor for Career Decidedness (CD) among Caucasian American male college students; however, the predictors in this model were not significant for the Career Decidedness (CD) of Hmong American male college students. These results suggest that future studies might include other predictors when considering the career choices of diverse groups.

Implications for Career Counseling

Past career counseling interventions have focused on individual trait assessments, teaching decision-making skills and increasing decision-making self-efficacy beliefs with less focus on both real and perceived contextual factors (e.g., educational and career barriers, family and role model support) that might serve as barriers or supports to career choice. Recently researchers have noted the importance of addressing perceived educational and career barriers (e.g., Brown & Lent, 1996; Hackett and Byars, 1996; Swanson & Woitke, 1997), family support (e.g., Tang et al., 1999) and role mode influence (e.g., Nauta & Kokaly, 2001) as part of the career counseling process. Moreover, Tang and colleagues (1999) found that family support might play a larger role than do career interests in the career choice of Asian American college students. These authors also have suggested strategies for working with clients to identify potential contextual factors and to realistically gage the positive and deleterious impact that these factors might have on an individual's range of career choices. Furthermore, adding contextual factors such as educational and career barriers and family and role model support into career research and career counseling assessment might assist ethnic minority individuals to make more appropriate career choices. For example, the data indicated that individuals who reported high levels of affective commitment also reported

high levels of career decidedness and career decision-making self-efficacy. Furthermore, results suggested that family support and role model support also were significantly related to affective commitment. Therefore, increasing family and role model support, a contextual variable that can be manipulated, might increase affective commitment, career decidedness and/or career decision-making self-efficacy.

Results of this investigation contribute to extant research supporting implementation of career counseling that includes the assessment and discussion of both beneficial and detrimental contextual factors (i.e., perceived career barriers, perceived educational barriers, family support and role models) and individual traits (i.e., positive and negative affect, optimism, and self-efficacy beliefs) in the career choice process of Hmong American college students and Caucasian American female college students. The present findings indicate that, at least among college student populations, significant numbers of educational and career-related barriers and supports are likely to be perceived among Hmong American college students and Caucasian American female college students. Past research results also support the plausibility that ethnic minorities and women might be especially affected by the perceived educational and career barriers in their career development. Integrating interventions for coping with educational and career barriers into career counseling might assist clients who are likely to encounter numerous barriers during the career decision-making process. Moreover, increasing client's coping skills in regards to perceived educational and career barriers might be crucial in fostering coping self-efficacy and career decidedness. Although less is known about the effects of family support and role model influence, counseling psychology research has found that social support is a predictor of well-being (e.g., Wang & Castaneda-Sound, 2008).

Extrapolating the evidence of social support in counseling psychology outcomes research to the career development process, the role of family support and role model influence needs to be addressed in career counseling. Examples of interventions might include encouraging family members to attend psycho-educational sessions about the career development process or establishing a network of accessible professional role models for clients to contact for support. Future studies also could address how family support and role model influence affect the career choice process of marginalized groups (e.g., Tang et al., 1999).

Implications for Future Research

Similar to preliminary stages of investigating career measures with minority groups, future research should explore the applicability of career development measures for Hmong American college students through factor structure analysis. Because of the possibility that these measures might demonstrate greater predictive validity for one group over another, studies also could investigate the predictive value of these career variables on specific career outcomes for Hmong American college students compared with other groups. Furthermore, mixed qualitative and quantitative methods investigating the career development process of Hmong American college students might assist in informing future construction of relevant quantitative measures.

To explore the finding that Hmong American female college students reported more role model influence than did Hmong American male college students, prospective or longitudinal studies investigating the contribution of role model support to college persistence are needed. Additionally, studies investigating the influence of role models on career persistence might clarify this finding. Other studies also could investigate sex and

ethnic comparison across Asian American ethnic groups to examine whether differences in immigration history such as type of immigration and pre-migration resources influence the career development process. Experimental design studies could collect career variable data to investigate how career interventions for Hmong Americans affect their career development process.

The results from this study provide evidence to support the continued investigation of sex and race and ethnic comparisons in the career development of women and racial and ethnic minority groups. Future studies might examine how gender roles and racial identity affect the career development of women and ethnic minority members. Results from these studies might be more applicable to the career choice process rather than evaluating orthogonal variables such as sex and race/ethnicity group membership.

Limitations of Study

Although the career development measures used in this study are psychometrically sound, very few of these measures were developed on minority group experiences generally and Hmong American experiences specifically. Studies using mixed qualitative and quantitative methods might better capture nuances specific to the career development of Hmong Americans. For example, the use of qualitative interviews might expand the identification of factors that relate to the career development of Hmong American male college students and could possibly reveal other factors that have not been considered for Hmong Americans generally. Additionally, cultural variables such as ethnic identity and acculturation were not collected in this study. Therefore, although questions can arise about the actual relation between Hmong culture and the significant

results of this study, very few claims can be made that the differences found between the groups are specifically related to cultural variables. However, results do suggest that significant differences exist between groups and the possibility that these differences might be related to cultural variables warrants further exploration. Furthermore, this study did not compare the career development of Hmong American college students to immigrant groups with more history in the United States. Comparisons with these other groups might reveal specific ethnic differences associated with Hmong American college students and/or similarities across groups related to the minority group experience.

Because this study was a cross-sectional study, some of the unexpected findings (e.g., Hmong American female college students report more role model influence than did Hmong American male college students) warrant further investigation. For example, are Hmong women who have role models more likely to persevere and attend college or do Hmong women who attend college seek out role models for inspiration? Longitudinal studies might illuminate more-in depth understanding of this finding.

Interventions based on these results (e.g., career decision-making skills class to enhance career decision-making self-efficacy) would benefit from studies measuring these career variables (i.e., career decidedness, career decision-making self-efficacy) before and after interventions to investigate the possibility of change. For example, would providing an intervention to increase coping self-efficacy with perceived educational and career barriers affect individuals' career decision-making self-efficacy or career decidedness? In addition, would the efficacy of these interventions vary with different sex or racial/ethnic minority groups?

CHAPTER 5

Summary

The extant career research with other minority groups generally shows significant sex and ethnic differences with women and ethnic minority students reporting more perceived educational and career barriers, less career decision-making self-efficacy, less coping self-efficacy, less career decidedness, less family support and role model influence than male and Caucasian American college students (e.g., Lopez and Ann-Yi, 2006; Luzzo, 1993; Luzzo & McWhirter, 2001; Weiss, 2000). Career research on racial and ethnic minority groups tends to investigate the career development of racial and ethnic groups with more history in the United States. Little is known about the career development of more recent refugee immigrant groups such as Hmong Americans. Because no previous research has investigated specific contextual factors and individual traits in the career development of Hmong American college students, this study was conducted to contribute to the gap in the career research. Results for Hmong American college students also were compared to Caucasian American college students to investigate sex and racial/ethnic comparisons.

Correlation results showed one consistent finding across all groups (e.g., Hmong American female college students, Hmong American male college students, Caucasian American female college students, Caucasian American male college students). A significant positive relation was found between Career Decision-making Self-Efficacy (CDSE) and Career Decidedness (CD). This consistent result across groups suggests that one possible effective vocational counseling intervention might include techniques to increase an individual's confidence in her or his ability to make good career decisions.

This intervention might be akin to current career counseling techniques that increase one's awareness, understanding and knowledge of appropriate career choices. Career researchers (e.g., Hirschi and Lage, 2008; Porter, 2008; Scott & Ciani, 2008) have found that participants who attend career exploration sessions significantly increase their career decidedness and career decision-making self-efficacy. Furthermore, Scott and Ciani (2008) found that female participants reported significant increases in their efficacy for career planning and problem solving. Eveland, Conyne and Blakney (1998) also found similar results with a computer assisted guidance system (DISCOVER); however, they found no significant differences in effectiveness for sex or race (i.e., Caucasian American college students, African American college students). Future studies could investigate the impact of career counseling on Hmong American college students' career decidedness and career decision-making self-efficacy.

Although the relation between Affective commitment (AFF) and other career variables were not hypothesized, correlation results indicated significant relations between Affective commitment (AFF) with Career Decidedness (CD), Career Decision-making Self-Efficacy (CDSE) and role model Support/Guidance (S/G) for all groups. These results suggest that Affective commitment (AFF) might be an important variable to consider in career interventions. Although some researchers (e.g. Meyer and Allen, 1993) have found that individuals who report higher levels of affective commitment are more likely to persist and better perform in their jobs, research on the antecedents and consequences of the different types of commitment (i.e., affective, continuance, normative) in the career choice process is lacking. The current understanding in career research is that individuals who pursue careers that are congruent with their career

interests are more likely to report positive experiences. Future studies could examine the relations between congruent career interests, affective commitment and career decidedness.

Data indicated that most of the other proposed hypotheses varied by sex and race/ethnic group membership. Two significant negative relations were found among contextual factors [i.e., perceived Educational Barriers (EB) and Coping self-efficacy with perceived Educational Barriers (EC), perceived Educational Barriers (EB) and Career Decision-making Self-Efficacy (CDSE)] and self-efficacy beliefs for Hmong American female college students, Hmong American male college students, and Caucasian American female college students. The relations between educational barriers and self-efficacy variables among these three groups suggests that adding components to career interventions to enhance coping self-efficacy and career decision-making self-efficacy might alleviate some of the deleterious effects of educational barriers. For example, assisting a Hmong American college student in fostering a positive supportive relationship with a teacher might be helpful. However, Lent and colleagues (2004) have noted that it remains unclear whether individuals who report fewer barriers have higher degrees of coping self-efficacy or if individuals with higher degrees of coping self-efficacy are likely to perceive fewer barriers. Future studies might examine this question by conducting an intervention study that measures pre and post perceived barriers with a career decision-making self-efficacy and/or coping self-efficacy enhancing activity. Additionally, future studies also could investigate the impact of cultural variables such as acculturation, gender role socialization and racial identity on the career decision-making self-efficacy of minority individuals. For example, one recent study, (i.e., Patel,

Salahuddin & O'Brien, 2008) found that English language acculturation was an important predictor in career decision-making self-efficacy.

Examining the relations among dispositional traits and career decidedness yielded significant results only for Hmong American male college students and Caucasian American female college students. Both groups reported significant positive relations between Career Decidedness (CD) and Positive Affect (PA) and Career Decidedness (CD) and Optimism (OPT). The negative relation between Pessimism (PESS) and Career Decidedness (CD) was only significant for Caucasian American female college students. Clark and Tellegen (1988) proposed two primary orthogonal dimensions of mood. Positive Affect (PA) is the extent to which a person feels enthusiastic, whereas, Negative Affect (NA) reflects a general disposition towards distress. The results of this study suggest that Positive Affect (PA) might be correlated with Career Decidedness (CD) for Hmong American male college students and Caucasian American female college students. Other studies (e.g., Cacioppo, Gardner, & Berntson, 1999; Fredrickson, 2001) have found that Positive Affect (PA) or feeling good is associated with more positive evaluations, creativity and more willingness to approach and explore new experiences. Because PA and NA are believed to be dispositional traits, they are less likely to change from counseling interventions. However, Optimism (OPT) might be more prone to change through intervention. Career Decidedness (CD) might be more likely to change by increasing Optimism (OPT) through techniques such as Cognitive Behavioral Therapy where clients are challenged about their negative thoughts (e.g., Creed, Patton, & Bartrum, 2002).

Overall correlation results also suggested that participants in this study might be more likely to recognize perceived Educational Barriers (EB) rather than perceived Career Barriers (CB). The propensity for participants to acknowledge and report perceived Educational Barriers (EB) might be a result of their experience. In other words, perceived Educational Barriers (EB) might be more salient to undergraduate students because of their current experience with college. Future studies could investigate whether the number of perceived Career Barriers (CB) increase for older adults or working adults.

MANOVA

A series of multivariate analyses of variance (MANOVA) were conducted to investigate sex and racial/ethnic comparisons in regards to specific career variables between Hmong American and Caucasian American college students. Racial/ethnic differences for the total sample indicated results in the expected directions whereas, examination of sex comparisons for the total sample provided expected significant sex-differences only for perceived Career Barriers (CB). Sex comparisons for the total sample found that female college students reported more perceived Career Barriers than did male college students. Contrary to expectations, results from this study found that women reported more role model Support and Guidance (S/G) than did their male counterparts. Although women reported more role model Support and Guidance (S/G) than did their male counterparts, women also reported more perceived Educational Barriers (EB) and Career Barriers (CB). In other words, S/G does not appear to decrease the number of perceived barriers that women report. Future studies could investigate the impact of role model support on the number of perceived barriers reported by directly providing role models and assessing whether perceived barriers decrease over time.

Contrary to expectations, this study did not find evidence to support the two proposed moderating effects [i.e., Coping self-efficacy with perceived Educational Barriers (EC) would moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD), Coping self-efficacy with Career Barriers would moderate the relation between perceived Career Barriers (CB) and Career Decidedness (CD)] despite suggestions from previous authors (e.g., Lent et. al, 2001) and prior findings (e.g., VilaCruz, 2003). These results could be due to the non-significant relations found between perceived Educational Barriers (EB) and Career Decidedness (CD), and perceived Career Barriers (CB) and Career Decidedness (CD) for Hmong American female, Hmong American male and Caucasian American male college students. In other words, only Caucasian American female college students reported a significant relation between the above mentioned variables.

Other moderator analyses indicated that Positive Affect (PA) and Pessimism did moderate the relations between perceived Educational Barriers (EB) and Career Decidedness (CD) for Caucasian American male college students. Negative Affect (NA) was found to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for Hmong American female college students. Optimism also was found to moderate the relation between perceived Educational Barriers (EB) and Career Decidedness (CD) for Hmong American female college students and Caucasian American male college students. These results indicate that dispositional characteristics do moderate the relation between perceived barriers and career decidedness and that these relations tend to vary by sex and racial/ethnic group membership. Future studies could

investigate the degree to which dispositional characteristics, stable traits, affect the career development of minority group members.

Hierarchical Multiple Regression

Hierarchical multiple regression analyses yielded sex and ethnic variations in the incremental and collective contributions of key predictors for Career Decidedness (CD) and Career Decision-making Self-efficacy (CDSE). Contextual support variables (i.e., family support and role model inspiration/modeling) accounted for 14% of Career Decidedness (CD) which suggests that Hmong American female college students might benefit from interventions that increase family support and role model inspiration. On the other hand, none of the predictors appeared to account for Career Decidedness (CD) in Hmong American male college students. For Caucasian American female college students, perceived Career Barriers (CB) and perceived Educational Barriers (EB) accounted for 5% of Career Decidedness. Coping self-efficacy with Educational Barriers (EC) accounted for 19% of Caucasian American male college students' Career Decidedness (CD). These results suggest that positive variables such as support and coping self-efficacy appear to assist Hmong American female college students and Caucasian American male college students. Future studies might want to further investigate what variables might better predict Career Decidedness (CD) for Hmong American male college students and Caucasian American female college students.

The present findings indicate a need to provide a more comprehensive assessment of contextual factors and individual traits to assist women and ethnic minorities in their career development process. Also including interventions to increase career decision-making self-efficacy, coping self-efficacy with barriers, family support and role model

influence might be beneficial. Future studies should expand on the results and limitations noted in this study such as evaluating the role of gender and ethnic identity in the career development of minority group members.

REFERENCES

Albaugh, L.M. & Nauta, M.M. (2005). Career decision self-efficacy, career barriers, and college women's experiences of intimate partner violence. *Journal of Career Assessment, 13,* 288-306.

Albert, K.A. & Luzzo, D.A. (1999). The role of perceived barriers in career development: A social cognitive perspective. *Journal of Counseling and Development, 77,* 431-436.

Ali, S.R., McWhirter, E.H. & Chronister, K.M. (2005). Self-efficacy and vocational outcome expectations for adolescents of lower socioeconomic status: A pilot study. *Journal of Career Assessment, 13,* 40-58.

Almquist & Angrist (1971). Role model influence on college women's career aspirations. *Merrill-Palmer Quarterly, 17,* 263-279.

American Psychological Association (1982).

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37,* 122-147.

Bandura, A. (1984) Recycling misconceptions of perceived self-efficacy. *Cognitive Therapy and Research, 8,* 231-255.

Bandura, A. (1986). *Social foundations of thoughts and actions: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman and Company.

Basow, S.A. & Howe, K.G. (1980). Role model influence: Effects of sex and sex-role attitude in college students. *Psychology of Women Quarterly, 4,* 558-572.

Betsworth, D.G., Bouchard, T.J., Cooper, C.R., Grotevant, H.D., Hansen, J.C., Scarr, S., & Weinberg, R.A. (1994). Genetic and environmental influences on vocational interests assessed using adoptive and biological families and twins reared apart and together. *Journal of Vocational Behavior, 44,* 263-278.

Betz, N. E. (1992). Counseling uses of career self-efficacy theory. *The Career Development Quarterly, 41,* 22-26.

Betz, N.E. (2000). Self-efficacy theory as a basis for career assessment. *Journal of Career Assessment, 8,* 205-222.

Betz, N.E. (2004). Contributions of self-efficacy theory to career counseling: A personal perspective. *The Career Development Quarterly, 52,* 340-353.

Betz, N.E. & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. *Journal of Counseling Psychology, 28,* 399-410.

Betz, N.E. & Hackett, G. (2006). Career self-efficacy theory: Back to the future. *Journal of Career Assessment* 2006, 14, 3-11.

Betz, N.E., Harmon, L.W., & Borgen, F.H. (1996). The relationships of self-efficacy for the Holland themes to gender, occupational group membership, and vocational interests. *Journal of Counseling Psychology, 43,* 90-98.

Betz, N.E., Klein, K.L., Taylor, K.M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment, 4,* 47-57.

Betz, N.E. & Voyten, K.L. (1997). Efficacy and outcome expectations influence career exploration and decidedness. *The Career Development Quarterly, 46,* 179-189.

Bieschke, K.J., Bishop, R.M. & Garcia, V.I. (1996). The utility of the research on self-efficacy scale. *Journal of Career Assessment, 4,* 59-75.

Binen, L. M., Franta, P. J, & Thye, R. (1995). *Career Support Scale.* Unpublished manuscript, University of Missouri–Columbia.

Blustein, D. L. (1989). The role of career exploration in the career decision making of college students. *Journal of College Student Development, 30,* 111-117.

Bowman, S. L. (1988). An examination of the career development of Black students. Unpublished doctoral dissertation, Southern Illinois University, Carbondale, Illinois.

Bordin, E.S. (1946). Diagnosis in counseling and psychotherapy. *Educational and Psychological Measurement, 6,* 169-184.

Brown, M.T. (2004). The career development influence of family of origin: considerations of race/ethnic group membership and class. *The Counseling Psychologist, 32,* 587-595.

Brown, S.D. & Lent, R.W. (1996). A social cognitive framework for career choice counseling. *The Career Development Quarterly, 44,* 354-367.

Brown, S.D., Lent, R.W. & Larkin, K.C. (1989). Self-efficacy as a moderator of scholastic aptitude academic performance relationships. *Journal of Vocational Behavior, 35, 64-75.*

Byars, A. M. (1997). Cultural influences on the career self-efficacy of African American college women. Unpublished doctoral dissertation, Arizona State University, Tempe, AZ.

Byars, A., & Hackett, G. (1998). Applications of social cognitive theory to the career development of women of color. *Applied and Preventive Psychology*, *7*, 255-267.

Byars-Winston, A.M. (2006). Racial ideology in predicting social cognitive career variables for Black undergraduates. *Journal of Vocational Behavior, 69,* 134-148.

Carver, C. S., & Scheier, M. F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism & pessimism* (pp. 31-51). Washington, DC: American Psychological Association.

Chang, Z. & Hansen, J.C. (2007). The Relationship between College Major Commitment, Vocational Interests and Personality. Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Chartrand, M.J., & Robbins, S.B. (1990). Using multidimensional career decision instruments to assess career decidedness and implementation. *Career Development Quarterly, 39,* 166-177.

Chartrand, M.J., Robbins, S.B., Morill, W.H., & Boggs, K. (1990). Development and validation for the Career Factors Inventory. *Journal of Counseling Psychology, 37,* 491-501.

Chronister, K.M. & McWhirter, E.H. (2004). Ethnic differences in career supports and barriers for battered women: A pilot study. *Journal of Career Assessment, 12,* 169-187.

Choi, Kim & Kim. (1997). Social Cognitive Career Theory with South Koreans. Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Clark & Tellegen (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54,* 1063-1070.

Constantine, M.G., Wallace, B.C., Kindaichi, M.M. (2005). Examining contextual factors in the career decision status of African American Adolescents. *Journal of Career Assessment, 13,* 307-319.

Creed, P.A., Patton, W., Bartrum, D. (2004). Internal and external barriers, cognitive style, and the career development variables of focus and indecision. *Journal of Career Development, 30,* 277-294.

Creed, P.A., Patton, W., Bartrum, D. (2002). Multidimensional properties of the Lot-R: Effects of optimism and pessimism on career and well-being related variables in adolescents. *Journal of Career Assessment, 10,* 42-61.

Creed, P.A., Conlon, E.G., Zimmer-Gembeck, M.J. (2007). Career barriers and reading ability as correlates of career aspirations and expectations of parents and their children. *Journal of Vocational Behavior, 70,* 242-258.

Crites, J. 0. (1969). Vocational psychology. New York: McGraw-Hill.

Crites, J.O. (1974). Career counseling, a review of major approaches. *The Counseling Psychologist, 4,* 3-23.

Dawis, R.V. & Loftquist, L. (1984). A psychological theory of work adjustment. Minneapolis, MN: University of Minnesota Press.

Dryler (1998). Parental role models, gender and educational choice. *The British Journal of Sociology, 49,* 375-398

Evans, K.M., and Herr, E.L. (1994). The influence of racial identity and the perception of discrimination on the career aspirations of African American men and women. *Journal of Vocational Behavior, 44,* 173-184.

Farmer, H.S. (1985). Model for career achievement motivation for women and men. *Journal of Counseling Psychology, 32,* 363-390.

Farmer, H.S. (1976).What inhibits career achievement and motivation in women? *The Counseling Psychologist, 6,* 12-14.

Fitzgerald, L.F. & Betz, N.E. (1994). Career development in cultural context: The role of gender, race, class, and sexual orientation. In M. Savickas & R.W. Lent (Eds.). *Convergence in Theories of Career Choice and Development.* Palo Alto, CA: Consulting Psychologist Press.

Fisher, T. A., & Padmawidjaja, I. (1999). Parental influences on career development perceived by African American and Mexican American college students. *Journal of Multicultural Counseling and Development, 27,* 136–152.

Flores, L.Y., & O'Brien, K.M. (2002). The career development of Mexican American adolescent women: A test of social cognitive career theory. *Journal of Counseling Psychology, 49,* 14-27.

Fouad, N.A. & Bingham, P. (1995). Career counseling with racial and ethnic minorities. In W.B. Walsh & S.H. Osipow (Eds.). *Handbook of Vocational Psychology: Theory, Research and Practice (2nd edition).* Mahway, NJ: Lawrence Erlbaum Associates, Publishers.

Fouad, N.A. & Byars-Winston, A.M. (2005). Cultural context of career choice: Meta-analysis of race/ethnicity differences. *The Career Development Quarterly, 53,* 223-233.

Fouad, N.A, Kantamneni, N., Smothers, M.K., Chen, Y., Fitzpatrick, M., Terry, S. (2008). Asian American career development: A qualitative analysis. *Journal of Vocational Behavior, 72,* 43-59.

Fouad, N.A. & Smith, P.L. (1996). A test of a social cognitive model for middle school students: Math and Science. *Journal of Counseling Psychology, 43*, 338-346.

Frazier, P.A., Tix, A.P., Barron, K.E. (2004). Testing the moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51,* 115-134.

Fuqua, D.R. & Hartman, B.W. (1983). Differential diagnosis and treatment of career indecision. *The Personnel and Guidance Journal,* 27-29.

Fuqua, D.R., Newman, J.L. & Seaworth, T.B. (1988). Relation of state and trait anxiety to different components of career indecision. *Journal of Counseling Psychology, 35,* 154-158.

Gianakos, I. (1995). The relation of sex role identity to career decision-making self-efficacy. *Journal of Vocational Behavior, 46,* 131–143.

Gianakos, I. (1996). Career development differences between adult and traditional-aged learners. *Journal of Career Development, 22,* 211–223.

Giankos, I. (1999). Patterns of Career Choice and Career Decision-Making Self-Efficacy. *Journal of Vocational Behavior, 54,* 244–258.

Gloria, A.M. & Hird, J.S. (1999). Influence of ethnic and non-ethnic variables on career decision-making self-efficacy of college students. *The Career Development Quarterly, 48,* 157-174.

Gushue, V.G., & Whiston, M.L. (2006). The relationship among support, ethnic identity, career decision self-efficacy, and outcome expectations in African American high school students. *Journal of Career Development, 33,* 112-124.

Gushue, V. G., & Whiston, M.L. (2006). The relationship of ethnic identity and gender role attitudes to the development of career choice goals among Black and Latina girls. *Journal of Counseling Psychology, 53,* 379-385.

Gushue, V.G., Clarke, C.P., Pantzer, K.M., Scanlan, K.R.L. (2006). Self-efficacy, perceptions of barriers, vocational identity, and the career exploration behavior of Latino/a high school students. *The Career Development Quarterly, 54,* 307-317.

Greene, A., Sullivan, H., & Beyard-Tyler, K. (1982). Attitudinal effects of the use of role models in information about sex-typed careers. *Journal of Educational Psychology, 74,* 393-398.

Hackett, G. & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior, 18,* 326-339.

Hackett, G., Betz, N. E., Casas, J. M., & Rocha-Singh, I. A. (1992). Gender, ethnicity, and social cognitive factors predicting the academic achievement of students in engineering. J*ournal of Counseling Psychology, 39,* 527-538.

Hackett, G. & Byars, A.M. (1996). Social cognitive theory and the career development of African American women. *Career Development Quarterly, 44,* 323-340.

Hamilton-Merritt, J. (1993). *Tragic Mountains: The Hmong, the Americans and the Secret Wars in Laos, 1942-1992.* Bloomington: Indiana University Press.

Hansen, J. C. (1984). The measurement of vocational interests: Issues and future directions. In S. D. Brown & R. W. Lent (Eds.), Handbook of counseling psychology (pp. 99-136). New York: Wiley.

Hawkins, J.G., Bradley, R.W. & White, G.W. (1977). Anxiety and the process of deciding about a major and vocation. *Journal of Counseling Psychology, 24,* 398-403.

Hill, M. (1997). Social cognitive theory and career development of African-American and Euro-American college students. *Dissertation Abstracts International, 58(7) 3925.*

Hill, N.E., Ramirez, C. & Dumka, L.E. (2003). Early adolescents' career aspirations: A qualitative study of perceived barriers and family support among low-income, ethnically diverse adolescents. *Journal of Family Issues, 24,* 934-959.

Hoffman, L.L., Jackson, A.P., Smith, S.A. (2005). Career barriers among Native American students living on reservations. *Journal of Career Development, 32,* 31-45.

Holland, J.L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd Ed.). Odessa, FL: Psychological Assessment Resources.

Howell, F.M., Frese, W., & Sollie, C.R. (1984). The measurement of perceived opportunity for occupational attainment. *Journal of Vocational Behavior, 25,* 325-346.

Jackson & Nutini (2002). Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Jones, L. K. (1988). *The Career Decision Profile.* (Available from Lawrence K. Jones, North Carolina State University, College of Education and Psychology, Department of Counselor Education, Box 7801, Raleigh, NC 27695).

Jones, L. K. (1989a*). The Career Decision Profile.* (Available from Lawrence K. Jones, North Carolina State University, Department of Counselor Education, Box 7801, Raleigh, NC 27695).

Jones, L.K. (1989b). Measuring a three-dimensional construct of career indecision among college students: A revision of the vocational decision scale-the career decision profile. *Journal of Counseling Psychology, 36,* 477-486.

Jones, L. K. & Lohman, R.C. (1998). The Career Decision Profile: Using a measure of career decision status in counseling. *Journal of Career Assessment, 6,* 209-230.

Kassab (2000). Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Kenny, M.E., Blustein, D.L., Chaves, A., Grossman, J.M., Gallagher, L.A. (2003). The role of perceived barriers and relational support in the educational and vocational lives of urban high school students. *Journal of Counseling Psychology, 50,* 142-155.

Kenny, M.E., Gualdron, L., Scanlon, D., Sparks, E., Blustein, D.L., Jernigan, M. (2007). Urban adolescents' constructions of supports and barriers to educational and career attainment. *Journal of Counseling Psychology, 54,* 336-343.

Ladany, N., Melincoff, D.S., Constantine, M.G., & Love, R. (1997) At-risk urban high school students' commitment to career choices. *Journal of Counseling and Development, 76,* 45-52.

Lee, J.K. (2008). The family characteristics, parenting methods, and parental education philosophies, experiences and expectations of Hmong parents and children. *Dissertation Abstracts International, AAT 3297031*

Lee, J.K. and Green, K. (2008). Hmong parental involvement and support: A comparison between families of high and low achieving high school seniors. *Hmong Studies Journal, 9.*

Lee, Stacey J. (2007). *The truth and myth of the model minority: The case of Hmong Americans.* Paik, Susan J (Ed); Walberg, Herbert J (Ed). Narrowing the achievement gap strategies for educating Latino, Black, and Asian students. (pp. 171-184). x, 210 pp. New York, NY, US: Springer Publishing Co.

Lent, R.W. & Brown, S.D. (1996). Social cognitive approach to career development: An overview. *The Career Development Quarterly, 44,* 310-322.

Leon, C.A. and Jackson, M.A. (2007). Influence of educational and career barriers on career indecision among Black and Latino adolescents. Poster presented at the 115th annual convention of the APA. San Francisco, CA.

Leong, F.T. (1986). Counseling and psychotherapy with Asian Americans: Review of the literature. *Journal of Counseling Psychology, 33,* 196-206.

Leong, F.T.L. (1991). Career development attributes and occupational values of Asian American and White American college students. *Career Development Quarterly, 39,* 221-230.

Leong, F.T.L. (1993). The career counseling process with racial ethnic minorities: The case of Asian Americans. *Career Development Quarterly, 42*, 26-40.

Leong, F.T.L. (ed). (1995). Career development and vocational behavior of racial and ethnic minorities. Hillsdale, NJ: L. Erlbaum Associates.

Leong, F.T.L. (2004). Academic careers in Asia: A cross-cultural analysis. *Journal of Vocational Behavior, 64,* 346-357.

Leong, F.T.L. Ebreo, A., Kinoshita, L. & Inman, A. (2007). Handbook of Asian American psychology: Second Edition. Thousand Oaks, CA, US: Sage Publications, Inc.

Leong, F. T. L., & Brown, M. T. (1995). Theoretical issues in cross-cultural career development: Cultural validity and cultural specificity. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology: Theory, research, and practice* (2nd ed., pp. 143-180). Mahwah, NJ: Lawrence Erlbaum Associates.

Leong, F.T.L. & Hartung, P.J. (2000). Adapting to the multicultural context of career. In A. Collin & R.A. Young (Eds). *The future of career.* Cambridge, MA: Cambridge University Press.

Leon & Jackson (2007). Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Lent, R. W., Brown, S. D., Brenner, B., Chopra, S. B., Davis, T., Talleyrand, R., & Suthakaran, V. (2001). The role of contextual supports and barriers in the choice of math/science educational options: A test of social cognitive hypotheses. *Journal of Counseling Psychology, 48,*474–483.

Lent, R.W., Brown, S.D., Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice and performance [Monograph]. *Journal of Vocational Behavior, 45,* 79-122.

Lent, R.W., Brown, S.D., Hackett, G. (1996). Career development from a social cognitive perspective. In D. Brown, L. Brooks, & Associates (Eds.) *Career choice and development (3rd edition).* San Francisco, CA: Jossey-Bass.

Lent, R.W., Brown, S.D., Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology, 47,* 36-49.

Lent, R.W., Brown, S.D., Schmidt, J. Brenner, B., Lyons, H., Treistman, D. (2003). Relation of contextual supports and barriers to choice behavior in Engineering majors: Test of alternative social cognitive models. *Journal of Counseling Psychology, 50,* 458-460.

Lent, R.W., Brown, S.D., Talleyrand, R., McPartland, E.B., Davis, T., Chopra, S.B., Alexander, M.S., Suthakaran, V., Chai, C.M. (2002). Career choice barriers, supports, and coping strategies: College students' experiences. *Journal of Vocational Behavior, 60,* 61-72.

Lewin, K. (1951). Field theory in social science: Selected theoretical papers. New York: Harper.

Lindley, L.D., (2005). Perceived barriers to career development in the context of Social Cognitive Career Theory. *Journal of Career Assessment, 13,* 271-287.

Locke, E. A., & Latham, G. P. (1984). *Goal setting: A motivational technique that works!* Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance.* Englewood Cliffs, NJ: Prentice Hall.

Locke, E.A. & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivating: A 35-year odyssey. *American Psychologist, 57*, 705-717.

Lopez, N. (2003). *Hopeful Girls, Troubled Boy: Race and Gender Disparity in Urban Education,* New York: Routledge.

Lopez, F. G., & Andrews, S. (1987). Career indecision: A family systems perspective. *Journal of Counseling and Development, 65*, 304-307.

Lopez, F.G., & Ann-Yi, S. (2006). Predictors of career indecision in three racial/ethnic groups of college women. *Journal of Career Development, 33,* 29-46.

Lopez, F.G., Lent, R.W., Brown, S.D., & Gore, Jr., P.A. (1997). Role of social-cognitive expectations in high school students' mathematics-related interests and performance. *Journal of Counseling Psychology, 44,* 44-52

Lucas, M.S. & Wanberg, C.R. (1995). Personality correlates of Jones' three-dimensional model of career indecision. *Journal of Career Assessment, 3,* 315-329.

Luzzo, D.A. (1993a). Ethnic differences in college students' perceptions of barriers to career development. *Journal of Multicultural Counseling and Development, 21,*

Luzzo, D.A. (1993b). Value of Career-Decision-Making Self-Efficacy in Predicting Career-Decision-Making Attitudes and Skills. *Journal of Counseling Psychology, 40,* 194-199.

Luzzo, D.A. (1995a). Gender differences in college students' career maturity and perceived barriers in career development. *Journal of Counseling & Development, 73,* 319-322.

Luzzo, D. A. (1995b). The relative contributions of self-efficacy and locus of control to the prediction of career maturity. *Journal of College Student Development, 36,* 61-66.

Luzzo, D.A. (1996). Exploring the relationship between perception of occupational barriers and career development. *Journal of Career Development, 22*, 239-248.

Luzzo, D. A. (1999). Identifying the career decision-making needs of nontraditional college students. *Journal of Counseling & Development, 77,* 135-141.

Luzzo, D.A. & Hutcheson, K.G. (1996). Causal attributions and sex differences associated with perceptions of occupational barriers. *Journal of Counseling and Development, 75,* 124-130.

Luzzo, D.A., & McWhirter, E.H. (2001). Sex and ethnic differences in the perception of educational and career-related barriers and levels of coping efficacy. *Journal of Counseling & Development, 79,* 61-67.

Mathieu, P. S., Sowa, C. J., & Niles, S. G. (1993). Differences in career self-efficacy among women. *Journal of Career Development, 19*, 187-196.

McWhirter, E.H. (1992). A test of the model of career commitment and aspirations of Mexican American high school girls. *Dissertation Abstracts International, 54(1), 92 (UMI: No 9307115).*

McWhirter, E.H. (1997). Perceived barriers to education and career: Ethnic and gender differences. *Journal of Vocational Behavior, 50,* 124-140.

McWhirter, E. H., Hackett, G., & Bandalos, D. L. (1998). A causal model of the educational plans and career expectations of Mexican-American high school girls. *Journal of Counseling Psychology, 45*(2), 166-181.

McWhirter, E. H., Rasheed, S., & Crothers, M. (2000). The effects of high school career education on social cognitive career variables. *Journal of Counseling Psychology, 47*, 330-341.

McWhirter, E.H., Torres, D.M., & Rasheed, S. (). Assessing barriers to women's career adjustment. *Journal of Career Assessment, 6,* 449-479.

McWhirter, E.H., Torres, D.M., Salgado, S., & Valdez, M. (2007). Perceived barriers and post-secondary plans in Mexican American and White adolescents. *Journal of Career Assessment, 15,* 119-

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1,* 61–89.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78,* 538–551.

Moua, M.T. (2007). An investigation of factors impacting Hmong students' completion of a four year postsecondary degree. *Dissertation Abstracts International, AAT 3280547*

Mouatounoua, K. (2005). The usefulness of the self-directed search in determining career development for Hmong college students (Doctoral Dissertation: Alliant International University). *Dissertation Abstracts International, 122.*

Mowday, R., Steers, R., & Porter, L. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14,* 224–227.

Multon, K.D., Brown, S.D., & Lent, R.W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38,* 30-38.

Nauta, M.M. and Kokaly, M.L. (2001). Assessing role model influence on student's academic and vocational decisions. *Journal of Career Assessment, 9,* 81-99.

Nieva, V.F. & Gutek, B.A. (1981). *Women and work: A psychological perspective.* New York: Praeger.

Osipow, S.H. (1999). Assessing career indecision. *Journal of Vocational Behavior, 55,* 147-154.

Osipow, S.H. (1994). Moving career theory into the twenty-first century. In M.L. Savickas & R.W. Lent (eds.) *Convergence in career development theories: Implications for science and practice.* Palo Alto, CA: CPP Books

Osipow, S.H., Carney, C.G., & Barak, A. (1976). A scale of educational-vocational undecidedness: A typological approach. *Journal of Vocational Behavior, 9,* 233-243.

Osipow, S.H., Carney, C.G., Winer, J., Yanico, B., & Koschier, M. (1979). *The Career Decision Scale*. Columbus, OH: Marathon Consulting.

Osipow, S.H., & Gati, Itamar. Construct and concurrent validity of the career decision-making difficulties questionnaire. *Journal of Career Assessment, 6,* 347-364.

Osipow, S.H. & Littlejohn, E.M. (1995). Toward a multicultural theory of career development. Prospects and dilemmas. In F.T.L. Leong's (Ed.) *Career development and vocational behavior of racial and ethnic minorities.* Mahwah, NJ: Lawrence Erlbaum.

Osipow, S.H. & Winer, J.L. (1996). The use of the career decision scale in career assessment. *Journal of Career Assessment, 4,* 117-130.

O'Leary, V. E. (1974). Some attitudinal barriers to occupational aspirations in women. *Psychological Bulletin, 81,* 809-826.

Patel, Salahuddin & O'Brien (2008). Career Decision-Making Self-Efficacy of Vietnamese Adolescents: The Role of Acculturation, Social Support, Socioeconomic Status, and Racism. *Journal of Career Development, 34,* 218-240.

Patton, W., Creed. P.A., & Watson, M. (2003). Perceived work related and non-work related barriers in the career development of Australian and South African adolescents. *Australian Journal of Psychology, 55,* 74-82.

Pfeifer, M.E. (2001). *U.S. Census 2000: Trends in Hmong population across the regions and metropolitan areas of the United States. Research Report.* St. Paul, MN: Hmong Resource Center of the Hmong Cultural Center.

Punch, R., Creed, P.A., Hyde, M.B. (2006). Career barriers perceived by hard of hearing adolescents: Implications for practice from a mixed methods study. *Journal of Deaf Studies and Deaf Education, 11,* 224-237.

Quimby, J.L. & DeSantis, A.M. (2006). The influence of role models on women's career choices. *The Career Development Quarterly, 54,* 297- 306.

Quimby, J.L. & O'Brien, K.M. (2004). Predictors of student and career decision-making self-efficacy among nontraditional college women. *The Career Development Quarterly, 52,* 323- 339.

Rogers, K. (2007). Twin cities trivia. *NWA WorldTraveler,* 84-85.

Robbins, S. B. (1985). Validity estimates of the Career Decision Making Self-Efficacy Scale. *Measurement and Evaluation in Counseling and Development, 18,* 64-71.

Rottinghaus, P. J., Betz, N. E., & Borgen, F. H. (2003). Validity of parallel measures of vocational interests and confidence. *Journal of Career Assessment, 11*, 355-378.

Savenye, W. (1990). Role models and student attitudes toward nontraditional careers. *Educational Technology Research & Development, 38,* 5 – 13.

Schaub, M. & Tokar, D.M. (2004). The role of personality and learning experiences in social cognitive career theory. *Journal of Vocational Behavior, 66,* 304-325.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4,* 219-247.

Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research, 16*, 201-228.

Scheier, M. F., & Carver, C. S. (1993). On the power of positive thinking: The benefits of being optimistic. *Current Directions in Psychological Science, 2*, 26-30.

Scheier, M.F., Carver, C.S., & Bridges, M.W. (1994). Distinguishing optimism from neuroticism and trait anxiety, self-mastery, and self-esteem: A reevaluation of the life orientation test. *Journal of Personality and Social Psychology, 67,* 1063-1078.

Schmidt, Angela E. (2003). An exploration of the relationships among career decidedness, indecisiveness, positive affect and negative affect in a sample of

community college students. *Dissertation Abstracts International Section A: Humanities and Social Sciences. Vol 64(11-A), 2004, pp. 3965.*

Scott, A.B. & Ciani, K.D. (2008). Effects of an undergraduate career class on men's and women's career decision-making self-efficacy and vocational identity. *Journal of Career Development, 34,* 263-285.

Shinnar, R. S. (2007). A qualitative examination of Mexican Immigrants' Career Development: Perceived barriers and motivators. *Journal of Career Development, 33,* 338-375.

Slaney, R.B. (1980). An investigation of racial differences on vocational variables among college women. *Journal of Vocational Behavior, 16,* 197-207.

Slaney, R.B. (1983). Influence of career indecision on the treatments exploring the vocational interests of college women. *Journal of Counseling Psychology, 30,* 55-63.

Slaney, R.B. & Brown, M.T. (1983). Effects of race and socioeconomic status on career choice variables among college men. *Journal of Vocational Behavior, 23,* 257-269.

Stead, G.B., Els, C. & Fouad, N. (2004). Perceived barriers among South African high school learners. *South African Journal of Psychology, 34,* 206-221.

Stead, G.B. & Watson, M.B. (1993). How similar are the factor structures of the Career Decision Scale, the Career Decision Profile, and the Career Factors Inventory? *Educational and Psychological Measurement, 53,* 281-290.

Sue, D.W., Arredondo, P., & McDavis, R.J. (1992). Multicultural counseling competencies and standards: A call to the profession. *Journal of Counseling and Development, 70,* 477-486.

Swanson, J.L. & Gore, Jr. P.A. (2000). Advances in vocational psychology, theory, and research. In D. Brown and R. Lent (Eds.) *Handbook of Counseling Psychology, (3rd edition).* New York: Wiley.

Swanson, J.L., Daniels, K.K., Tokar, D.M. (1996). Assessing perceptions of career-related barriers: The career barriers inventory. *Journal of Career Assessment, 4,* 219-244.

Swanson, J.L. & Gore, Jr., P.A. (2000). Advances in vocational psychology theory and research. In D. Brown and R. Lent (Eds.), *Handbook in Counseling Psychology, (3rd ed.).* New York: Wiley.

Swanson, J.L. & Tokar, D.M. (1991a). College students' perceptions of barriers to career development. *Journal of Vocational Behavior, 38,* 92-106.

Swanson, J.L. & Tokar, D.M. (1991b). Development and initial validation of the Career Barriers Inventory. *Journal of Vocational Behavior, 39,* 344-361.

Swanson, J.L., & Woitke, M.B. (1997). Theory into practice in career assessment for women: Assessment and interventions regarding perceived career barriers. *Journal of Career Assessment, 5,* 443-462.

Swartz, T., Lee, J.C., & Mortimer, J.T. (2003). Achievements of first generation Hmong youth: Findings from the Youth Development Survey, *Cura Reporter,* 15-21.

Takeuchi, D.T, Zane, N., Hong, S., Chae, D.H., Gong, F., Gee, G.C., Walton, E., Sue, S. & Alegria, M. (2007). Immigration-related factors and mental disorders among Asian Americans. *American Journal of Public Health, 97,* 84-90.

Taylor, K.M. & Betz, N.E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22,* 63-81.

Taylor, K.M. & Popma, J. (1990). An examination of the relationship among career decision-making self-efficacy, career salience, locus of control, and vocational indecision. *Journal of Vocational Behavior, 37,* 17-31.

Tang, M., Fouad, N.A. & Smith, P.L. (1999). Asian American career choices: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior, 54,* 142-157.

Thao, N.X. (2009). Examining family and community influences on the attitudes to education and career aspirations of Hmong/Mong high school students. *Dissertation Abstracts International, UMI Number: 3358651*

Vang (2001). *Hmong population and education in the United States and world.* Retrieved November 2007 from htpp://www.laohumanrights.org/2001data.html.

VilaCruz, G. (2003). Barrier perceptions, coping efficacy, and other career-related factors within a community college population: A social cognitive career theory perspective. *Dissertation Abstracts International, 64(08), 2781. (UMNI: 3101329)*

Vroom, V. (1964). *Work and Motivation.* New York: Wiley.

Vue, P.P. (2007). Factors that contribute towards and/or impede Hmong women from obtaining a higher educationa degree. *Dissertation Abstracts International, AAT 3280548.*

Watson, D., Clark, L.A., Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 6,* 1063-1070.

Weiss, K.I. (2000). The social cognitive model of career choice: A cross-cultural analysis. *Dissertation Abstracts International, 61 (9), 5012.*

Whiston, S.C. (1996). The relationship among family interaction patterns and career indecision and career decision-making self-efficacy. *Journal of Career Development, ,* 137-149.

Yang, K. (2003). Hmong Americans: A review of felt needs, problems, and community development. *Hmong Studies Journal, 4,* 1-2.

APPENDIX

APPENDIX A

Table 56.

Cronbach's Alphas and Inter-correlations of Participants' Scores on Key Measures (Hmong Women = 100)

		ά	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	CB	.90	1															
2	EB	.91	.25*	1														
3	EC	.94	-.09	-.44**	1													
4	CC	.92	-.22*	-.29**	.57**	1												
5	S/G	.87	.00	-.38**	.30**	.19	1											
6	I/M	.82	.12	-.15	.11	.17	.43**	1										
7	FAM	.85	-.09	-.44**	.31**	.23*	.52**	.37**	1									
8	AFF	.86	.09	-.07	.11	.09	.25*	.41**	.27**	1								
9	CONT	.81	.18	.29**	-.06	-.16	-.02	.03	.02	-.03	1							
10	NORM	.80	.04	.22*	-.18	-.16	.04	.18	.13	.08	.38**	1						
11	OPT	.62	.06	-.10	.30**	.31**	.28**	.40**	.31**	.39**	-.14	-.06	1					
12	PESS	.57	-.07	.36**	-.28**	-.35**	-.18	-.21*	-.37**	-.21*	-.03	.19	-.26**	1				
13	CDSE	.96	-.15	-.39**	.38**	.36**	.37**	.35**	.42**	.38**	-.05	-.00	.35**	-.32**	1			
14	PA	.92	.03	-.18	.37**	.37**	.32**	.35**	.26**	.25*	-.04	-.09	.56**	-.24*	.35**	1		
15	NA	.87	.34**	.45**	-.22*	-.31**	-.28**	-.18	-.25*	-.13	.24*	.20*	-.19	.28**	-.26**	-.03	1	
16	CD	.82	-.05	-.07	.07	.11	.16	.29**	.29**	.29**	.12	.14	.13	-.15	.53**	.18	-.04	1

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

1. CB = Perceived Career Barriers, **2**. EB = Perceived Educational Barriers, **3.** EC = Coping Self-Efficacy with Perceived Educational Barriers, **4.** CC = Coping Self-Efficacy with Perceived Career Barriers, **5.** S/G = Role Model Support/Guidance, **6.** I/M = Role Model Inspiration/Modeling, **7.** FAM = Family Support, **8.** AFF = Affective Commitment, **9.** CONT = Continuance Commitment, **10.** NORM = Normative Commitment, **11.** OPT = Optimism, **12.** PESS = Pessimism, **13.** CDSE = Career Decision-Making Self-Efficacy, **14.** PA = Positive Affect, **15.** NA = Negative Affect, **16.** CD = Career Decidedness

APPENDIX B

Table 57.
Cronbach's Alphas and Inter-correlations of Participants' Scores on Key Measures (Hmong Men = 70)

		ά	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	CB	.93	1															
2	EB	.90	.63**	1														
3	EC	.92	-.32**	-.49**	1													
4	CC	.95	.10	-.12	.33**	1												
5	S/G	.82	-.23	-.34**	.33**	.01	1											
6	I/M	.73	-.18	-.21	.23	-.22	.51**	1										
7	FAM	.75	-.23	-.46**	.49**	.15	.41**	.43**	1									
8	AFF	.84	-.17	-.26*	.30*	.08	.27*	.18	.36**	1								
9	CONT	.66	.08	.06	-.04	-.09	-.22	.01	-.05	-.07	1							
10	NORM	.71	-.05	.06	-.06	-.19	-.02	.13	-.11	.16	.19	1						
11	OPT	.74	.02	-.22	.37**	.07	.24*	.27*	.44**	.33**	-.24*	.23	1					
12	PESS	.50	.19	.27*	-.09	.12	.04	-.17	-.21	-.15	-.15	.11	-.07	1				
13	CDSE	.95	-.11	-.33**	.53**	.14	.53**	.37**	.51**	.58**	-.12	.13	.53**	.00	1			
14	PA	.89	-.04	-.32**	.43**	.09	.49**	.28*	.39**	.36**	-.11	.05	.47**	.06	.71**	1		
15	NA	.86	.23	.39**	-.15	-.23	.16	-.09	-.23	-.09	-.00	-.04	-.29*	.19	-.13	.04	1	
16	CD	.87	-.09	-.16	.24*	.06	.25*	.13	.20	.48**	-.08	.07	.31**	.02	.50**	.40**	-.11	1

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

1. CB = Perceived Career Barriers, **2**. EB = Perceived Educational Barriers, **3.** EC = Coping Self-Efficacy with Perceived Educational Barriers, **4.** CC = Coping Self-Efficacy with Perceived Career Barriers, **5.** S/G = Role Model Support/Guidance, **6.** I/M = Role Model Inspiration/Modeling, **7.** FAM = Family Support, **8.** AFF = Affective Commitment, **9.** CONT = Continuance Commitment, **10.** NORM = Normative Commitment, **11.** OPT = Optimism, **12.** PESS = Pessimism, **13.** CDSE = Career Decision-Making Self-Efficacy, **14.** PA = Positive Affect, **15.** NA = Negative Affect, **16.** CD = Career Decidedness

APPENDIX C

Table 58.
Cronbach's Alphas and Inter-correlations of Participants' Scores on Key Measures (Caucasian Women = 137)

		ά	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	CB	.88	1															
2	EB	.88	.33**	1														
3	EC	.94	-.19*	-.37**	1													
4	CC	.93	-.12	-.22*	.52**	1												
5	S/G	.92	-.11	-.52**	.35**	.16	1											
6	I/M	.88	-.11	-.32**	.23**	.14	.43**	1										
7	FAM	.91	-.12	-.54**	.25**	.08	.58**	.36**	1									
8	AFF	.87	-.09	-.25**	.13	.13	.21*	.28**	.31**	1								
9	CONT	.90	.07	.22*	-.09	-.08	-.24**	-.14	-.29**	.04	1							
10	NORM	.82	.03	.09	.04	-.07	-.02	.04	-.05	.18*	.46**	1						
11	OPT	.70	-.21*	-.31**	.22*	.09	.36**	.39**	.23**	.20*	-.17*	.04	1					
12	PESS	.86	.09	.35**	-.23**	-.33**	-.28**	-.24**	-.23**	-.18*	.09	.09	-.58**	1				
13	CDSE	.92	-.05	-.46**	.24**	.08	.40**	.42**	.45**	.41**	-.19*	-.01	.43**	-.27**	1			
14	PA	.85	-.02	-.33**	.13	.04	.41**	.41**	.37**	.37**	-.10	.00	.48**	-.36**	.49**	1		
15	NA	.88	.16	.34**	-.29**	-.22*	-.37**	-.18*	-.22**	-.05	.11	.13	-.32**	.43**	-.14	-.22**	1	
16	CD	.78	-.17*	-.18*	.07	-.03	.29**	.32**	.35**	.38**	.00	.19*	.38**	-.17*	.55**	.47**	-.03	1

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

1. CB = Perceived Career Barriers, **2**. EB = Perceived Educational Barriers, **3.** EC = Coping Self-Efficacy with Perceived Educational Barriers, **4.** CC = Coping Self-Efficacy with Perceived Career Barriers, **5.** S/G = Role Model Support/Guidance, **6.** I/M = Role Model Inspiration/Modeling, **7.** FAM = Family Support, **8.** AFF = Affective Commitment, **9.** CONT = Continuance Commitment, **10.** NORM = Normative Commitment, **11.** OPT = Optimism, **12.** PESS = Pessimism, **13.** CDSE = Career Decision-Making Self-Efficacy, **14.** PA = Positive Affect, **15.** NA = Negative Affect, **16.** CD = Career Decidedness

APPENDIX D

Table 59.
Cronbach's Alphas and Inter-correlations of Participants' Scores on Key Measures (Caucasian Men = 58)

		ά	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	CB	.81	1															
2	EB	.86	.15	1														
3	EC	.90	-.00	-.07	1													
4	CC	.92	-.16	-.10	.21	1												
5	S/G	.91	-.07	-.55**	.02	-.08	1											
6	I/M	.88	-.13	-.17	-.13	.03	.35**	1										
7	FAM	.80	-.05	-.44**	.03	.08	.61**	.39**	1									
8	AFF	.89	-.18	-.22	.15	-.11	.26*	.26*	.21	1								
9	CONT	.92	.14	.00	-.11	.03	-.15	-.19	.04	-.15	1							
10	NORM	.80	-.00	.14	.04	-.01	-.18	-.01	-.02	.09	.43**	1						
11	OPT	.53	.22	-.27*	.15	-.05	.15	.24	-.02	.21	-.10	-.10	1					
12	PESS	.73	.03	.42**	-.14	.08	-.29*	-.19	-.08	-.15	.18	.17	-.56**	1				
13	CDSE	.92	-.03	-.24	.17	.07	-.09	.13	.29*	.43**	.17	.04	.04	-.02	1			
14	PA	.89	-.05	-.09	.09	.11	.07	.14	.24	-.01	-.13	-.02	.13	-.24	.18	1		
15	NA	.84	-.12	-.00	.06	.26*	-.10	-.06	-.04	.05	-.12	-.09	-.37**	.09	.05	-.21	1	
16	CD	.62	-.06	.00	.37**	.35**	.05	.22	.21	.44**	.14	.25	-.13	.04	.57**	.00	.24	1

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

1. CB = Perceived Career Barriers, **2**. EB = Perceived Educational Barriers, **3.** EC = Coping Self-Efficacy with Perceived Educational Barriers, **4.** CC = Coping Self-Efficacy with Perceived Career Barriers, **5.** S/G = Role Model Support/Guidance, **6.** I/M = Role Model Inspiration/Modeling, **7.** FAM = Family Support, **8.** AFF = Affective Commitment, **9.** CONT = Continuance Commitment, **10.** NORM = Normative Commitment, **11.** OPT = Optimism, **12.** PESS = Pessimism, **13.** CDSE = Career Decision-Making Self-Efficacy, **14.** PA = Positive Affect, **15.** NA = Negative Affect, **16.** CD = Career Decidedness

APPENDIX D

SOCIAL COGNITIVE CAREER THEORY DIAGRAM