INFLUENCE OF GENERATIONAL STATUS AND FINANCIAL STRESS ON ACADEMIC AND CAREER SELF-EFFICACY

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL

IN PARITAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE

DOCTOR OF PHILOSOPHY

BY

AARIKA VANNATTER, M.A.

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BALL STATE UNIVERSITY

MUNCIE, INDIANA 47306

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ACKNOWLEDGEMENTS

First and foremost, I would like to thank my partner and love of my life, Josh White. Your support throughout this process, as well as my educational journey, has been my lifeline. Your ability to encourage me when I doubted myself, be patient when I took out my frustrations on you, and make me laugh when I got too serious helped keep me grounded so I did not get lost in the Ivory Tower.

I would also like to thank my mentor and committee chair, Dr. Kristin Perrone-McGovern. Your guidance and fine-tuned method made this process smoother than I could have hoped and let me enjoy my time on internship with my dissertation checked off "the list." Thank you to the rest of my committee for your support and effort in this project. Dr. White, I realize it had nothing to do with this study, but thank you for not retiring before I finished.

I am grateful to my doctoral cohort: Yves Ambroise, Kory L. Carey, Mona Ghosheh, Tricia Groff, Tae Sun Kim, Jerry Novack, Dustin Shepler, and Jill Sullivan. Your support and feedback helped me shape this study into exactly what I wanted. I am especially thankful to my dear friend Summer for listening to me on our car rides to and from campus and helping to remind me, "It's just a paper." Our study sessions were instrumental in completion of this project, even if it did seem like I was just practicing to open my own "boba store." Thanks to Jerry Novack for your friendship and humility. I can't tell you how many times I reminded myself: "If the Real Roxanne can do it…"

Thank you to my wonderful father for serving as my final proof-reader and supportive listener. You are one of the few people outside of my program who really understands what the word "dissertation" entails. You helped me feel a little less like a

first-generation doctoral student. Your constant belief in me and reminders that "I'm special" helped me with my own self-efficacy throughout this project and my graduate school experience.

I would like to thank all of my participants for taking the time to complete the surveys for this project. I reached my minimum goal in an unexpected 2 weeks! I realize most of you have forgotten you even took these surveys and probably will never read this; however, your participation in research is very important to the career goals of aspiring researchers as well as to the fields in which the research is being conducted. Please keep participating when you can.

Finally, I would like to thank all of my friends and family who were patient and understanding when I was MIA to work on this project, homework, prelims, etc. etc. etc., or just needed to sleep! There are too many of you to mention by name, but know I thought of each of you throughout the last few years and am looking forward to the time we will get to spend together from here forward.

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Abstract

Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) provided a theoretical framework for the present study. Students' beliefs in their abilities to perform academic tasks (i.e., academic self-efficacy; Solberg, O'Brien, Villarreal, Kennell, & Davis, 1993) and to make career-related decisions (i.e., career decision self-efficacy; Betz & Taylor, 2001) are influential in their completion of college. College students with limited financial resources and those who do not have a family member in an older generation who graduated from college may not experience the same degree of efficacy as those students with greater financial resources or a college graduate role model in their families (Horn & Nuñez, 2000; Oliver, Rodriguez, & Mickleson, 1985; Wohlgemuth et al., 2006-2007). The present study tested two hypotheses: 1) First-generation college students will express lower levels of academic self-efficacy and career decision self-efficacy than continuing-generation college students; and 2) College students with high financial stress will express lower levels of academic self-efficacy and career decision self-efficacy than those with low financial stress. A 2 x 3 factorial multiple analysis of variance (MANOVA) was used to test the hypotheses. Significant results of the MANOVA were explored using descriptive discriminant function analysis. Three post-hoc analyses were also completed. The results revealed no significant differences on levels of academic or career decision self-efficacy based on generational status, however, differences in both forms of self-efficacy were found based on financial stress. Strengths and limitations, implications for theory and counseling, and directions for future research

are discussed. Consistent with SCCT, the salient factor of financial stress has an influence on college students' academic self-efficacy and career decision self-efficacy. Contrary to much of the past research, one's generational status does not have an influence on these two variables.

Chapter One-Introduction

Influence of Generational Status and Financial Stress on

Academic and Career Self-Efficacy

With today's rising unemployment rates, education is more important than ever in helping individuals to be able to compete in the job market. Individuals who have earned a Bachelor's degree or higher are more likely to be employed than are those who have not (Baum, Ma, & Payea, 2010). More specifically, unemployment rates for these individuals are around 4%, while unemployment rates for those who have only attended some college or earned an Associate's degree are around 10% (Baum et al.). In addition, individuals who have completed a Bachelor's degree have higher incomes than do those who have not completed a Bachelor's degree (Baum et al.; CollegeBoard, 2010a). Thus, many individuals are motivated to pursue a college degree in order to increase their earning potential for the future, but at the same time they often incur a significant amount of debt. With the rising costs of post-secondary education, the amount of student debt is increasing (CollegeBoard, 2010b). Therefore, it is crucial that college students complete their degrees and begin a career that can help them repay this debt. Several factors have been found to be important in this process, including students' beliefs in their abilities to perform academic tasks (i.e., academic self-efficacy; Robbins et al., 2004; Wright, Perrone-McGovern, Boo, & Vannatter, under review) and to make career-related

decisions, in order to become employed in a career that is meaningful to the individual (i.e., career decision self-efficacy; Wright et al.). However, many students are under financial stress, and it is unclear how this may influence their feelings of confidence in academic and career realms. Further, as college degrees have grown increasingly more necessary in order to compete in the job market, more individuals who do not have college-educated family members may be pursuing college degrees as first-generation college students. In the present study, I investigated the role of financial stress and generational status on college students' academic and career decision self-efficacy.

Statement of the Problem

College students with limited financial resources and those who do not have a family member in an older generation who graduated from college may not experience the same degree of efficacy as those students with greater financial resources or a college graduate role model in their families (Horn & Nuñez, 2000; Oliver, Rodriguez, & Mickleson, 1985; Wohlgemuth et al., 2006-2007). Several authors have explored these variables. For example, Horn and Nuñez (2000) compared high school students whose parents did not attend college (i.e., prospective first-generation college students) to those with one or both parents who attended college. They found that prospective first-generation college students were less likely to enroll in college within two years of their high school graduation than those with at least one parent who attended college. They went on to compare prospective first-generation college students with students who had at least one parent who earned a bachelor's degree. They found that the gap between the numbers of students who enrolled in college within two years after high school graduation was even larger between these two groups than between prospective first-

generation college students and those with at least one parent who attended but did not complete college. Horn and Nuñez also found lower levels of self-efficacy for prospective first-generation college students than for those with at least one parent who attended college or completed a college degree.

I am particularly interested in learning more about the experiences of students who do not have a college graduate role model in their family (often referred to as *first-generation college students*). Previous research that has examined first-generation college students has identified issues and characteristics that are unique to this population. For example, first-generation college students have been found to have a higher dropout rate than continuing-generation college students. Chen (2005) found that 43% of first-generation college students dropped out of college. This rate was only 4% higher than the dropout rate of students whose parent(s) attended some college. More surprising was the low dropout rate of 20% for students with at least one parent who had a bachelor's degree or higher. With regard to degree attainment, first-generation college students were found to be more likely to attain a 2-year degree (23%) than were those whose parent(s) had some college (14%) or a 4-year degree (7%), but were less likely than these two groups to attain a 4-year degree (24% compared with 39% and 68%, respectively). Based on Chen's findings, it is clear that parental education levels can influence the level of education attained by their children. However, research is needed to investigate the specific mechanisms that influence academic success for first-generation college students.

Previous research has found that many first-generation college students come from low-income families. For example, Horn and Nuñez (2000) found that

approximately 50% of students whose parents never attended college were from low-income families. For students whose parents had some college or had attained a degree, this percentage dropped to approximately 30% and 10%, respectively. Regardless of parental education level, these percentages indicate a large number of students from low-income families who may be unable to provide financial assistance for the student to pursue post-secondary education (Horn & Nuñez, 2000). For example, 59% of all undergraduate applicants at Ball State University were found to need financial aid; however, only 63% of their total need, on average, was met through financial aid programs (College Data, 2009), leaving the rest the responsibility of the students or their families. For students whose parents are unable to assist them financially, college could be a challenging experience. The lack of financial support could lead to financial stress in several ways. The students may have to work long hours to cover educational costs, or they may take out loans and feel pressure to finish college in order to pay back their debts (Kadison & DiGeronimo, 2004).

The present study addressed this problem by examining the contextual factors that are salient for college students (i.e., financial stress and generational status) and the influence these have on cognitive factors important to one's experience in college. Specifically, I sought to learn about the effects of generational status and financial stress on college students' academic self-efficacy and career decision self-efficacy.

Definition of Important Terms

Financial stress. Financial stress is defined as "an individual's judgments about and emotional responses to his or her financial condition" (Prawitz et al., 2006, p. 34).

Generational status. Generational status is defined by whether participants consider themselves to be first-generation or continuing-generation college students. *First-generation college students* are students who lack, or perceive themselves to lack, a family member in an older generation who graduated from a 2-year or 4-year post-secondary educational institution. *Continuing-generation college students* are students who have, or perceive themselves to have, a family member in an older generation who graduated from a 2-year or 4-year post-secondary educational institution.

Self-efficacy. Self-efficacy is defined as one's belief in one's own ability in a particular situation or environment (Lent, Brown, & Hackett, 1994).

***Academic self-efficacy*.** Academic self-efficacy is defined in the present study as college students' beliefs in their own abilities to perform academic tasks (Solberg, O'Brien, Villarreal, Kennell, & Davis, 1993) and is based on Albert Bandura's definition of self-efficacy (Bandura, 1977).

***Career decision self-efficacy*.** Career decision self-efficacy, as with academic self-efficacy, is based on Bandura's (1977) definition of self-efficacy but was also derived from the combination of Bandura's Social Cognitive Theory and the career literature (Betz & Hackett, 1981). Career decision self-efficacy is defined as the belief in one's abilities to make career-related decisions (Betz & Taylor, 2001) and is important because of its influence on eventual employment in a career that is meaningful to the individual (Wright et al., under review).

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT; Lent et al., 1994) provided a framework for understanding contextual and cognitive factors relevant to one's college experience.

SCCT was designed to examine the process of initial career development, including academic behaviors (Lent et al., 1994). The theory has generated a significant amount of research that has provided empirical support for the theory and its propositions (e.g., Lent, Brown, Gore, 1997; Lopez, Lent, Brown, & Gore, 1997; Ochs & Roessler, 2004). As Lent et al. (1994) described, SCCT was based on Bandura's Social Learning Theory (SLT) and thus provided a link between educational and career development and psychosocial development. According to Lent and colleagues, SCCT is especially appropriate for individuals in college, as this is a crucial time for career development and decision-making.

SCCT incorporates factors both within and outside of the individual that are theorized to influence one another directly, indirectly, and reciprocally (Lent et al., 1994). The first of these factors is termed person inputs. These include, but are not limited to, biological predispositions for certain skills or vocational behaviors, gender, race/ethnicity, and disability/health status (Lent et al.). Another component of the theory is background contextual affordances (i.e., distal contextual factors) such as career role models (Lent et al., 2000). These include influences from one's background prior to entering college. That is, they are temporally distal to the college experience (Lent et al., 2000). Lent et al. (1994, 2000) recognized the importance of one's upbringing, societal messages one receives, cultural variables (e.g., cultural values about education or career), the presence of a career-related role model, and a host of other factors outside of the person's control on one's career development. Thus first-generation college students may have different experiences from students who are not the first in their families to graduate from college.

SCCT posits that the influence of past experience, observation of others, and/or one's physiological or affective state can influence the development of self-efficacy (Lent et al., 1994). Self-efficacy influences interests, goals, and actions (Lent et al.). According to SCCT, supports or barriers in an individual's current environment (i.e., proximal contextual influences) also influence one's goals and actions (Lent et al., 2000). Funding for education could function as a support or barrier to efficacy beliefs, depending on the individual's perception of his/her financial situation.

This leads to a final important point about SCCT, that is the underlying assumption that individuals construct meaning from interaction with environmental factors rather than reacting in a pre-determined way to stimuli (i.e., constructivist approach; Lent, Hackett, & Brown, 1999). In this way, the factors that are present in one's environment are determined to be important or not important, supports or barriers, relevant or irrelevant, by the individuals themselves. In keeping with the cognitive constructivist approach, it is not up to a researcher to define specific aspects of participants' experiences. Rather, these definitions should be based on each individual's perceptions of contextual factors (Lent et al.).

Purpose of the Study

The purpose of the present study was to explore college students' levels of financial stress and generational status in relation to social cognitive variables. SCCT (Lent et al., 1994) provided a framework for the present study. The findings from the present study may assist in extending SCCT by examining two proximal and two distal contextual variables that have not been studied extensively within this theoretical framework. The present study also examined multiple components of SCCT in

combination, rather than treating them as isolated variables as some past researchers have done (e.g., Ali & Saunders, 2006; Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008; Hellman, 1996). Finally, the present study examined the subjective experiences of college students rather than focusing on objective measures such as GPA or re-enrollment. Driven by the underlying assumptions of SLT (Bandura, as cited in Lent et al., 1994), this approach was intended to help highlight and better understand the influence that contextual factors have on academic self-efficacy and career decision self-efficacy for college students who are enrolled in a 4-year university.

Significance

The present study has both practical and theoretical significance. The findings may be used to better inform stakeholders (e.g., students, parents or family members, professors, college administrators, financial lenders, scholarship/grant providers, potential employers) of factors that can influence college students' academic self-efficacy and career decision self-efficacy. These variables have been linked to college students' experiences, including their performance in (e.g., GPA) and persistence with (i.e., re-enrollment, retention, graduation) college (e.g., Gore, 2006; Robbins et al., 2004; Robbins et al., 2009). With the current national college drop-out rate falling around 35% from freshman to sophomore year and the graduation rate only around 45% for 2-year and 4-year degree-seekers (ACT, 2009), the results of the present study can guide stakeholders in focusing interventions to improve college performance or persistence for first-generation college students and for those with differing levels of financial stress during college. With regard to theory, the present study examined first-generation college students using SCCT. While SLT has been used in a few studies of first-

generation college students' self-efficacy (e.g., Majer, 2009; Ramos-Sánchez, & Nichols, 2007), no studies were found to utilize multiple components of SCCT with this population. The present study will serve to provide empirical evidence for specific components of SCCT.

Research Questions/Hypotheses

The present study explored contextual factors that occurred prior to participants' entrance into college (i.e., distal contextual factors) separately from contextual influences that existed during participants' college experience (i.e., proximal contextual influences). The distal contextual factor of interest here was generational status and the proximal contextual influence of interest was the level of financial stress while in college. The research questions explored in the present study were:

1) Will college students express different levels of academic self-efficacy and career decision self-efficacy, based on the distal contextual factor of generational status?
2) Will college students express different levels of academic self-efficacy and career decision self-efficacy, based on the proximal contextual factor of financial stress?

In order to answer these questions, the following hypotheses were tested:

H1: First-generation college students will express lower levels of academic self-efficacy and career decision self-efficacy than continuing-generation college students.

H2: College students with high financial stress will express lower levels of academic self-efficacy and career decision self-efficacy than those with low financial stress.

Chapter Two

Imagine you have never been outside of your hometown. Now imagine you are given a map and told you can go out on your own to one of the locations that have been marked on the map. However, if you choose to do this, there are some challenges you will have to overcome. First of all, you will have to choose which location to set as your destination. Secondly, your trip will cost you money that you may have to earn along the way or pay back when you are done. In addition, you are told that you can ask for directions but you have to figure out who the right people are to help you, find them, and avoid the ones who will lead you in the wrong direction. And above all else, you need to bring back a token that proves how far and how long you traveled. Would you go? How would you decide? If you look to your parents, would one or both be able to guide you from their own experience? Will they expect you to go or will you have to convince them that it is a good idea? What about other family members? Do you look to grandparents, aunts, or uncles who may have travelled this path?

This description is analogous to the decisions and challenges faced by college students. Financial worries are salient for many college students, especially in difficult economic times (Kadison & DiGeronimo, 2004). Students who receive financial assistance from family members can see the sacrifices made for them and may feel guilty about the burden this places on the family. Students who take out loans are responsible

for re-paying them eventually (Kadison & DiGeronimo). Those who need to work to support themselves through college may have less time to spend on homework, may have to miss class to work (or vice versa), and may have trouble concentrating on school when financial needs are left unmet (Kadison & DiGeronimo). This added burden combined with growing costs of tuition and other, often less obvious, costs of going to college (e.g., travel, books, fees, computers, housing) make financial stress an important factor to examine in research on college students' academic and career development.

Students who do not have a family role model who is a college graduate (i.e., first-generation college students) are also at-risk for having a difficult college experience. These students may have different beliefs about college and careers than those who had a college graduate role model in their family (Lent et al., 1994, 2000). It has also been found that first-generation college students are more likely to be from low-income families (Horn & Nuñez, 2000) and so they may not be able to rely on family members for financial assistance.

What has yet to be seen is how these two variables influence individuals' beliefs in their ability to complete the academic and career related tasks necessary to earn a bachelor's degree and gain meaningful employment. In order to better understand these variables, a review of the literature will be conducted following an in-depth discussion of the theoretical framework for the present study.

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) provides a framework to understand the experience of first-generation college students and college students with varying levels of financial stress. SCCT was based on Bandura's Social Learning Theory (SLT) and was

first proposed by Lent et al. (1994). SCCT provides a link between education/career development and psychosocial development. The theory incorporates both internal and external factors, which have been found to be directly, indirectly, and reciprocally related (e.g., Lent et al., 1997; Lopez et al., 1997; Ochs & Roessler, 2004).

Lent et al. (1994) theorized that background contextual affordances and person inputs affect individuals before they enter college. Background contextual affordances are external factors such as culture and/or gender role socialization, opportunities to develop interests, and exposure to role models (e.g., a family member who is a college graduate). These affordances are considered distal because they exist prior to the development of career-related interests and may serve as supports or barriers for the individual's academic and career pursuits (Lent et al., 2000). Person inputs are internal factors and include biological predispositions (e.g., intellectual ability) gender, race/ethnicity, and disability status (Lent et al., 1994). Person inputs are theorized as having three possible modes of influence over an individual's career-related interests and behaviors. According to Lent et al., these three modes include a precursory influence, a moderating influence, or a direct facilitation/deterrence. Researchers have examined the relationship of person inputs to educational and career-related factors. For example, Kelly, Gunsalus, and Gunsalus (2009) utilized SCCT to examine the influence of race on social cognitive predictors for Korean American students. The authors found similarities between American and Korean American college students with respect to goal development.

Person inputs and background contextual factors can influence one another directly (Lent et al., 2000). For example, opportunities for developing career interests

may be influenced by the gender-role socialization messages (background contextual affordance) for individuals of a particular gender and/or race/ethnicity (person inputs). Rivera and colleagues utilized SCCT to examine career barriers for Hispanic women (Rivera, Blumberg, Chen, Ponterotto, & Flores, 2007). The authors used path analysis in order to determine which of two models best fit this population. Their findings indicated that self-efficacy beliefs were predictive of career choice regardless of whether careers being considered were male- or female-dominated careers. The authors recommended that career counselors working with Hispanic women assess individuals' self-efficacy beliefs in order to determine whether these self-evaluations need to be enhanced so that other career choices might be considered.

Background contextual affordances and person inputs also directly affect learning experiences (Lent et al., 2000). Learning experiences provide sources of self-efficacy for academic and career interests and choice behaviors (Lent et al., 1994; Lent et al., 1999). Similar to Bandura's (1977) theory, Lent et al. (1999) described four sources of self-efficacy: mastery experiences (i.e., past success or failure), vicarious experiences (i.e., watching a role-model succeed or fail), social persuasion (i.e., encouragement or discouragement from others), and physiological and emotional states (e.g., high anxiety can negatively influence performance (Bandura, 1977)). Any or all of these learning experiences can directly influence one's academic and career self-efficacy and/or outcome expectations.

Self-Efficacy. Self-efficacy is an individual's belief in his or her own ability in a particular situation/environment, while outcome expectations include beliefs about the likely results of a particular action (Lent et al., 1994). Bandura described efficacy beliefs

as having varying strength, magnitude, and generality (i.e., situational vs. global). Although Carifio and Rhodes (2002) attempted to show that academic self-efficacy was purely a state variable, they found that there was a strong trait component to academic self-efficacy. This finding supports Bandura's assertion that self-efficacy can be both general and specific.

Self-efficacy has been found to influence a variety of factors such as academics (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), career (e.g., Rivera et al., 2007), pain (e.g., Bandura, O'Leary, Taylor, Gauthier, & Gossard, 1987), health behaviors (e.g., Collins, Lunos, & Ahluwalia, 2010; Yarcheski, Mahon, Yarcheski, & Cannella, 2004), and homelessness (e.g., Epel, Bandura, & Zimbardo, 1999). Researchers have provided evidence that individuals with greater self-efficacy have more adaptive coping (e.g., Epel et al.), exhibit positive health behaviors (Collins et al.; Yarcheski et al.), and strive for higher achievement (Bandura et al., 1996; Rivera et al.) than those with less self-efficacy. For the present study, the author focused on two specific forms of self-efficacy: academic and career decision self-efficacy.

Academic self-efficacy. Academic self-efficacy is defined as college students' beliefs in their own abilities to perform academic tasks (Solberg et al., 1993). A meta-analysis conducted by Multon, Brown, and Lent (1991) resulted in moderate effect sizes between academic self-efficacy and both academic performance and persistence. In addition, academic self-efficacy has been shown to have an influence on one's motivation and persistence in the face of adversity (Bandura et al., 1996; Miller, 2002). Specifically related to college outcome, self-efficacy beliefs can influence a student's decision to stay enrolled in college, transfer to another institution, or withdraw (e.g., Brown et al., 2008;

see Robbins et al., 2004 for other examples). In addition, academic self-efficacy has been shown to be an important psychosocial and study skill factor that is predictive of college outcome (Robbins et al., 2004). This is especially true for freshmen and has been shown to be predictive above and beyond that of standardized test scores alone (Gore, 2006).

Career decision self-efficacy. According to Betz and Taylor (2001), career decision self-efficacy, or one's belief in one's abilities to make career-related decisions, is influenced by the same four sources as academic self-efficacy (i.e., past performance, vicarious learning, verbal persuasion, and emotional arousal; Bandura, 1977; Betz & Taylor, 2001). A number of researchers have conducted empirical studies examining career decision self-efficacy, and this variable has been linked to variables such as perfectionism (Ganske & Ashby, 2007) and vocational identity (Gushue, Clarke, Pantzer, & Scanlan, 2006). Career decision self-efficacy has also been found to be related to specific components of SCCT. For example, Gushue et al. (2006) found a relationship between perceptions of supports and barriers and career decision self-efficacy for Latino/a high school students. Rivera et al. (2007) found a relationship between career decision self-efficacy and role models (i.e., background contextual affordance). Ochs and Roessler (2004) found that career decision self-efficacy was predictive of intentions to explore careers for middle school students with varying disability statuses (i.e., person inputs).

According to SCCT, one's self-efficacy and/or outcome expectations directly and indirectly influence one's interests and choice behaviors (Lent et al., 1994). Choice behaviors include both goals and actions toward meeting these goals. Supports or barriers in one's immediate environment are believed to influence one's choice behaviors

(Lent et al., 1999, 2000). These immediate supports or barriers, known as proximal contextual influences, include availability of career network contacts, financial stress or support, and discriminatory hiring or acceptance practices (Lent et al., 2000).

SCCT is a respected and commonly used theory in the academic and career development literature. A considerable amount of research can be found regarding self-efficacy in general, and academic self-efficacy and career decision self-efficacy specifically. Researchers have demonstrated the importance of distal or proximal supports and barriers on academic experiences and career development. However, relatively little is known about the importance of two salient contextual affordances, generational status and financial stress, as they relate to college students' academic and career-decision self-efficacy. Studies that have examined at least one of these contextual affordances and at least one form of self-efficacy were the focus of the following review.

Literature Review

Method of the Review

Inclusion criteria. In order to be included in the literature review, studies must have been published in a peer-reviewed journal after SCCT was introduced in 1994, and must have examined either generational status and/or financial stress in combination with academic and/or career decision self-efficacy. SCCT posits that self-efficacy is necessary in order for one to aspire to go to college or enter a particular career (Lent et al., 1994). Therefore, the related variables of educational aspirations and career aspirations will be included as part of the literature review. In addition, if studies that described sources of self-efficacy (Lent et al., 1994) as being important for student success in college were

found using the search terms listed here, these were also included, regardless of whether or not self-efficacy was measured.

Procedure. In order to locate these studies, the following search terms were used for each independent variable in combination with the search terms for each dependent variable:

IV1: *generation(al), generation(al) status, first-generation, first-generation college, first-generation college student, college student, parental education level, familial support*

IV2: *finances, financial, financial stress, financial strain, financial well-being, financial burden, financial difficulty, financial attitude, financial satisfaction, socio-economic, socio-economic status*

DV1: *academic efficacy, academic self-efficacy, college efficacy, college self-efficacy, college student self-efficacy, efficacy, aspirations*

DV2: *career efficacy, career self-efficacy, career decision efficacy, career decision self-efficacy, career decision-making, career decision-making efficacy, career decision-making self-efficacy, career decidedness, career indecision, vocational decision, occupational decision, career, career barriers, efficacy, aspirations*

PsychINFO, PsychArticles, Academic Search Premier, and ERIC databases were utilized. Studies that could not be retrieved in English through the author's university library or interlibrary loan program were not included, nor were studies that defined generational status in terms of immigration rather than college attendance. A total of 23 studies from 18 journals were identified for inclusion in the review across the four

variable combinations. Repetition came from the *College Student Journal* (3 studies), *Journal of College Counseling* (2 studies), and *Journal of College Student Development* (3 studies). The findings from the literature review will be discussed and analyzed in the following sections.

Generational Status and Academic Self-Efficacy

Using the search terms and inclusion criteria listed above, 14 studies were found that were related to first-generation college students and academic self-efficacy. These studies came from the following 13 journals: *Career Development Quarterly*, *College Student Journal*, *Journal of Applied Research in the Community College*, *Journal of College Counseling*, *Journal of College Student Development* (2), *Journal of Diversity in Higher Education*, *Journal of Phenomenological Psychology*, *Journal of Social Issues*, *Journal of Social Psychology*, *Journal of the National Medical Association*, *Journal of Youth Adolescence*, *The ANNALS of the American Academy of Political and Social Science*, and *Urban Education*.

Researchers have studied first-generation college students in a variety of ways. Comparisons between first-generation and continuing-generation college students have provided a unique picture regarding academic self-efficacy and educational aspirations for this population. Beginning prior to entering college, differences can be seen between prospective first-generation college students and prospective continuing-generation college students. For example, Gibbons and Borders (2010) found that academic self-efficacy was lower for prospective first-generation college students (i.e., seventh graders) than for prospective non-first-generation college students. In addition, prospective first-generation college students perceived more barriers to college, such as lack of role

models, negative role models, or finances, compared to prospective non-first-generation college students.

What was unclear in the study by Gibbons and Borders (2010) was whether the prospective students eventually entered college, since no follow-up was reported. Other authors, however, have examined this population over time. In a longitudinal study of first-generation college students, McCarron and Inkelas (2006) found a discrepancy between educational aspirations of prospective first-generation and continuing-generation college students with prospective first-generation college students primarily aspiring to less than a bachelor's degree. In addition, the participants were surveyed again eight years after high school graduation and it was found that a smaller proportion of the prospective first-generation college students had attained a bachelor's degree or higher compared to prospective continuing-generation college students. The former were also less likely to attain their educational goals than prospective continuing-generation college students.

Other studies have also found that parental education levels influence college-going aspirations of their children (Grodsky & Riegle-Crumb, 2010; Messersmith & Schulenberg, 2008). Messersmith and Schulenberg asked about expectations regarding completion of college. Although they did not call it academic self-efficacy, they asked high school students if they "definitely won't, probably won't, probably will, or definitely will" graduate college with a 4-year degree. Therefore, it seems they were measuring the students' beliefs about their own ability to accomplish academic-related tasks. Regardless of the term used, the authors found a strong positive relationship between parental education level and expectations for college success (i.e., academic self-

efficacy). Interestingly, Kerpelman and colleagues found no such differences for African-American adolescents when exploring general self-efficacy, educational aspirations, and parental education levels (Kerpelman, Eryigit, & Stephens, 2008). However, they did find that parental support was positively related to educational aspirations and mother support was positively related to general self-efficacy. It remains unclear if these findings would be replicated if academic self-efficacy were studied.

One study found no difference between the related variable of academic confidence for first- and continuing-generation college students (Strage, 1999). However, this study only included students who were taking a Child Development class, and there were a small number of first-generation student participants (n = 43) compared with continuing-generation student participants in the study (n = 107). This could limit generalizability because there may have been something unique about the students in the class, or the small sample size may have led to small correlations. Therefore, the results of that study should be considered with caution.

Hellman (1996) studied newly enrolled, first time students at a 2-year community college in the Midwestern region of the United States. Using a one-way ANOVA, the author determined that academic self-efficacy was lower for first-generation college students than those whose parents had earned a bachelor's degree or higher. In order to measure academic self-efficacy, the author used a single, 5-point Likert-type item that was developed for the study and had no prior validity established. In addition, the item asked students to rate their academic ability compared with the general population. As there is no psychometric evidence of the validity or reliability of this measure, these results should be considered with caution.

More recently, Wang and Castañeda-Sound (2008) examined the influence of generational status, self-esteem, perceived social support, and academic self-efficacy on undergraduates' psychological well-being. Students self-identified as first-generation or continuing-generation college students. According to the preliminary analyses of demographic variables reported by the authors, first-generation college students were more likely to be ethnic minorities (especially Latino/a or Asian American), to come from poor, working class, or middle class families (as compared to upper middle class or upper class), and to be older than students who were not first-generation college students. Unlike Hellman (1996), Wang and Castañeda-Sound used the College Self-Efficacy Instrument (CSEI; Solberg et al., 1993), which has evidence of adequate reliability and validity. Therefore, the results from this study can be interpreted with more confidence than can those from Hellman's study. Findings from the study by Wang and Castañeda-Sound similarly indicated that academic self-efficacy was significantly lower for first-generation college students than continuing-generation college students. In addition, the interaction between generational status and support from family members was a significant predictor of well-being for first-generation college students only.

Researchers have also been interested in college performance (e.g., GPA) or college outcome variables (e.g., persistence, retention, graduation). Ramos-Sánchez and Nichols (2007) tested whether or not academic self-efficacy, as measured by the CSEI, was a mediator between generational status and either academic performance or college adjustment. In order to do this, they first determined that first-generation college students had lower levels of self-efficacy and academic performance, but equal levels of college adjustment to continuing-generation college students. The authors did not find that

academic self-efficacy served as a mediator between generational status and academic performance. One limitation of this study was the use of only part of the CSEI. The authors used 10 items, which is half of the total scale. They reported acceptable internal consistency but could not provide validity data of this modified version. Therefore, it is unclear whether their results are an accurate representation of the relationship between generational status, academic self-efficacy, and academic performance.

Unlike Ramos-Sánchez and Nichols, Vuong et al. (2010) used the entire CSEI to measure self-efficacy of first-generation and continuing-generation sophomores. They were interested in self-efficacy and academic success and found that GPA was a function of self-efficacy and was lower for first-generation college sophomores than continuing-generation college sophomores. The authors did not find significant differences in levels of self-efficacy between these two groups, however, the definition of first-generation college students was liberal and included students who actually did have a role model (i.e., one parent in dual-parent homes) who earned a bachelor's degree. Therefore, the range of self-efficacy scores for first-generation college students may have had a higher upper limit in this study than in previous studies, leading to non-significant results. Further research is needed in this area.

Other researchers have studied first-generation college students without comparison to continuing-generation students. For example, Majer (2009) used survey methodology and quantitative analyses to examine first-generation college students. Majer studied first-generation college students in a community college in order to examine academic success and self-efficacy, Majer found that there was a relationship between self-efficacy and academic success. However, because Majer did not compare

these findings to continuing-generation college students, it is unclear whether the results are unique to this population.

Phinney and Haas (2003) also did not compare their findings for first-generation college students to continuing-generation college students. Instead, they focused on ethnic minority first-generation college students in the first year of college only. They utilized surveys and a narrative approach. The researchers gave surveys to 25 first-generation college students, on which two items were used to assess college self-efficacy. The participants then used journal writing to complete narratives related to coping in college. The researchers used qualitative analysis and determined that greater coping was related to greater expressed self-efficacy. Again, it is unclear whether these results are similar for continuing-generation college students.

A qualitative study of first-generation college students revealed that students often feel they are behind their peers in college preparation and academic skills needed for college (Reid & Moore, 2008). During interviews, the students made statements that indicated they did not have the kinds of experiences needed during high school to build their self-efficacy (Lent et al., 1994) for success in college. For example, one student reported taking classes for English as a second language (ESL), which required much less writing than regular English classes. The student reported feeling overwhelmed when asked to write long research papers in college. Similarly, another student reported only being required to write one-page essays, and being able to write less than that without penalty when he was in high school; however, that same student was then penalized for writing less than three pages in college, and reported feeling overwhelmed by this. Some of the students in Reid and Moore's study reported receiving encouragement and

assistance with the college application process from programs at their high schools. According to SCCT, this kind of encouragement and support serves as a source of self-efficacy (Lent et al.). If family members cannot provide this encouragement, it must come from other sources. In Reid and Moore's study, the first-generation students who had participated in college preparation programs reported experiencing this kind of institutional support, but these same students did not mention support from family members. Other qualitative research for this population has suggested that extended family members may provide the kinds of support and encouragement needed to increase one's academic self-efficacy (Olive, 2008).

Generational Status and Career Decision Self-Efficacy

Using the search terms and inclusion criteria listed above, two studies were found that were related to first-generation college students and career decision self-efficacy. These studies came from the following two journals: *Journal of College Student Development* and *Journal of Phenomenological Psychology*. It should be noted that one of the studies (Olive, 2008) was also included in the review for generational status and academic self-efficacy.

Olive (2008) used a qualitative approach to understand the experiences of Hispanic first-generation college students. The author conducted interviews with three students. To analyze the data, Olive used a phenomenological approach. This approach involves finding meaning from what is presented by participants rather than forming hypotheses and seeking to confirm or disconfirm these (Olive). The goal is to understand experiences involved in a particular phenomenon (Olive). Each of the three participants in that study was involved in an academic support program while in college. The results

indicated that program helped provide support and guidance to make up for the lack of familial role models. The results also indicated that self-efficacy was acquired as the individual gained experiences that other family members did not have. In terms of SCCT (Lent et al., 1994), past accomplishments, rather than vicarious learning, served as the primary source of self-efficacy for the participants.

Researchers of the second study used a quantitative approach and compared first-generation college students to continuing-generation college students (Martinez, Sher, Krull, & Wood, 2009). Martinez and colleagues found that first-generation college students had higher career aspirations than continuing-generation college students. That is, they expressed a greater desire to go to college to increase career opportunities than did their peers. However, despite having fewer behaviors related to attrition (e.g., drug or alcohol use, desire to party), first-generation college students were more likely than their peers to leave school both temporarily (prolonging graduation) or permanently.

Financial Stress and Academic Self-Efficacy

Using the search terms and inclusion criteria listed above, three studies were found that were related to financial stress and academic self-efficacy. These studies came from the following three journals: *Journal of College Student Development*, *Journal of Phenomenological Psychology*, and *Journal of the National Medical Association*. It should be noted that two of the studies (McCarron & Inkelas, 2006; Olive, 2008) were included in other sections already reviewed.

Although not specific to academic self-efficacy, one study found that African-American students who experience financial difficulty have reported that this adds to academic problems (Wiggs & Elam, 2000). Ironically, students are often attending

college in an effort to gain financial stability (Olive, 2008). However, one's socio-economic status (SES) seems to play a role in the level of academic aspirations one has before entering college and also the level of education attained (McCarron & Inkelas, 2006). McGarron and Inkelas found that prospective college students' from lower socioeconomic backgrounds exhibited lower academic aspirations and attainment than those from higher socioeconomic backgrounds.

Financial Stress and Career Decision Self-Efficacy

Using the search terms and inclusion criteria listed above, eight studies were found that were related to financial stress and career decision self-efficacy. These studies came from the following seven journals: *College Student Journal* (2), *Human Performance*, *Journal of College Student Development*, *Journal of Extension*, *Journal of Vocational Behavior*, *Medical Education*, and *Research in Higher Education*. It should be noted that one study (Martinez et al., 2009) was also included in the section on first-generation college students and career decision self-efficacy.

Most relevant to the variables of interest was the study by Sandler (2000). Sandler combined multiple theoretical frameworks, including SCCT, to explore the influence of several variables on students' retention in college. The author examined 23 variables, including career decision self-efficacy, perceived stress in college, and perceived financial difficulty. Participants in the study were non-traditional students (i.e., 24-years old and above), who were seeking either a 2-year or 4-year degree at a university in the United States. Approximately half of the students were ethnic minorities and three-fourths were female. Responses to two surveys were analyzed using structural equation modeling. The results indicated that career decision self-efficacy had the most

influence on persistence through both direct and indirect effects. This variable was found to be negatively related to perceived stress about college, which in turn influenced the perception of financial difficulty. Interestingly, the perception of financial difficulty resulted in a slight increase in students' intent to persist in college. One possible explanation is that those who perceive high financial difficulty want to improve their situation by obtaining a degree.

Leppel (2005) studied only first-generation college students and found that attitudes towards finances contributed to choice of college major or career. In Leppel's study, men and women from lower socioeconomic backgrounds emphasized the importance of earning potential in making decisions about a future career. Related findings by Scott and Church (2001), who surveyed undergraduates with both married and divorced parents, indicated that the need for financial independence was positively related to career decidedness. This finding was contrary to Scott and Church's hypothesis. However, it makes sense that students who want to earn money on their own will be committed to developing a career. What is of more interest is how actual financial situations affect students' career goals and beliefs in their ability to attain these goals.

In a qualitative study of first-generation female college students, one theme that arose was the limitation placed on career goals due to financial difficulties (Eitel & Martin, 2009). In that study, a focus group revealed the need for students to work during school in order to cover expenses, which they reported could put them behind in school and make graduation more difficult. Eitel and Martin's (2009) findings may help to explain the findings by Martinez et al. (2009). Martinez and colleagues found that first-

generation students were more likely to work during college as compared to continuing-generation students. They also found that first-generation students were more likely than continuing-generation students to use scholarships, grants, and loans to pay for school and were less likely to have savings or financial support from parents. Despite having higher career aspirations and lower self-defeating behaviors (e.g., party-going, problems with peers), first-generation students still had lower GPAs and were more likely to dropout of college. The need to work, especially full-time, was found to mediate the relationship between generational status and attrition. Therefore, Martinez and colleagues asserted that financial concerns can be crucial for these students.

Researchers have also examined how variables related to finances influence career decisions for those who are not in college. One study found that job security and financial concerns had as least some influence on career decisions for women who graduated from medical school (Lawrence, Poole, & Diener, 2003). In that study, the factors that were more influential were 1) women friendliness; 2) flexibility; and 3) interest.

Trougakos and colleagues surveyed spouses of military personnel to determine the influence of supports or barriers on social cognitive variables using SCCT as a framework (Trougakos, Bull, Green, MacDermid, & Weiss, 2007). The researchers looked at several variables they believed would influence career-related self-efficacy. They found a significant positive relationship between the participants' income level and career efficacy. They derived that income served as a source of efficacy because it was evidence of past work success. The authors did not find a significant relationship between perceptions of financial conditions and participants' career-related self-efficacy.

However, to assess this financial strain, they used a single Likert-type item (1 = over my head; 5 = very comfortable) to ask participants to describe their current financial situation. Without validity data, it is unclear whether this question truly represents the construct of perceived financial difficulty.

The final study identified for this review examined members of the general population in Kentucky, rather than college students (Pushkarskaya & Usher, 2010). The authors were interested in advising educational and support programs on ways to help increase self-efficacy for resolving financial and non-financial environmental uncertainties for those who wish to start their own business in the hopes of bettering their financial situation. They explored the influence self-efficacy and environmental (including financial) uncertainty had on choosing a career as an entrepreneur. In order to measure self-efficacy, the authors developed an 11-item scale based on prior research. They conducted factor analysis with the sample and determined the scale had two factors: financial self-efficacy and non-financial self-efficacy. The authors did not report reliability or validity data for the 11 items, which is a weakness of the study. However, the findings did suggest that self-efficacy beliefs were related to one's entrepreneurial intentions. The authors concluded that self-efficacy beliefs played a larger role in such intentions than one's assessment of specific skills he or she possessed. This can help explain Sandler's (2000) findings in that if individuals have the need to better their financial situation and the belief that they can accomplish this through continuing in college or starting a business, they are likely to do so even in the face of continued financial hardship.

Conclusion

Several important conclusions can be drawn from the studies reviewed above. These conclusions are related to the way variables were defined and measured. These will be discussed in the following sections followed by suggestions for further research.

Defining terms. One thing that should be noted from the definitions used in the studies of first-generation college students is that the term "first-generation" was applied, but in most cases, only parents were used to define one's status. This limited the possibility that students may have a role model in an older generation other than a parent (e.g., aunt/uncle, grandparent). In addition, prior research has suggested that having a family member (usually parent) who graduated college has a greater influence on social cognitive and academic variables for future generations compared to having a family member who attended college but did not graduate (Chen, 2005). Therefore, the use of a definition for this variable that includes only those with a family member who graduated college is recommended to capture the experience for these students.

On the other hand, the studies included in this review were fairly consistent with the definition of self-efficacy, whether it was career decision self-efficacy or academic self-efficacy. Most researchers based the definition of self-efficacy on Bandura's original definition and then described definitions given by authors such as Lent et al. (1994) or Betz and Taylor (2001) to link specifically to academic or career decision self-efficacy, respectively.

Common measures. Of the studies described above that used valid and reliable measures of academic self-efficacy, several utilized the CSEI (Ramos-Sánchez & Nichols, 2007; Vuong et al., 2010; Wang & Castañeda-Sound, 2008). Majer utilized the

Beliefs in Educational Success Test (BEST; Majer, as cited in Majer, 2009), which is based on Bandura's theory of self-efficacy. In order to study career decision self-efficacy, Sandler (2000) used the Career Decision-Making Self-Efficacy-Short Form scale (CDMSE-SF; Betz & Taylor, 2001). No other career decision self-efficacy scales were used. No scales were identified in this review to measure generational status or financial stress. For generational status, parental education level was often asked of participants or gathered through the college admissions or registrar's offices. For financial variables, authors developed an item or two in an effort to measure these constructs but could not provide validity data (e.g., Trougakos et al., 2007) or utilized items that were part of a larger instrument (e.g., Sandler, 2000). Pushkarskaya and Usher (2010) conducted factor analysis to test the 11-item scale they developed. However, this measured financial self-efficacy, not financial stress. Therefore, a scale for this variable still needs to be identified for use with this population.

Suggestions for Further Research

Based on the literature review presented here, it has been determined that career decision self-efficacy and academic self-efficacy are important variables for success in college (e.g., Bandura et al., 1996; Brown et al., 2008; Gore, 2006; Majer, 2009; Miller, 2002; Multon et al., 1991; Robbins et al., 2004; Sandler, 2000). However, research on these variables has been limited and they have not been studied in combination with first-generation college students or with those with financial stress. In fact, the majority of the studies found were related to first-generation college students and academic self-efficacy. Few studies have examined this population and career decision self-efficacy. While more studies have examined financial variables and career decision self-efficacy, these studies

did not look specifically at financial stress. Consistent with SCCT, it is one's perception of one's financial condition as a support or barrier to college and career that is most important to one's self-efficacy in these areas (Lent et al., 1994). Therefore, more research examining the four variables explored in this review is needed. In order to do this, the following research questions and hypotheses were tested:

1) Will college students express different levels of academic self-efficacy and career decision self-efficacy, based on the distal contextual factor of generational status?

    H1: First-generation college students will express lower levels of academic self-efficacy and career decision self-efficacy than continuing-generation college students.

2) Will college students express different levels of academic self-efficacy and career decision self-efficacy, based on the proximal contextual factor of financial stress?

    H2: College students with high financial stress will express lower levels of academic self-efficacy and career decision self-efficacy than those with low financial stress.

Chapter Three

Method

Participants

Sample size. According to Cohen (1992), an appropriate power for which to aim is .80, unless otherwise determined by previous research. According to VanVoorhis and Morgan (2001), the number of participants needed to obtain this level of power when using a multivariate analysis of variance (MANOVA) is 30 per cell with an effect size of .80. Because the present study explored two independent variables, one with two levels one with three levels, the total number of cells was six. Therefore, 180 participants were needed for the present study for both an effect size and power of .80.

A total of 439 participants accessed the online survey. Of these, one person declined the informed consent and, therefore, did not complete the survey. Another person accepted the informed consent but did not respond to any items and withdrew after 18 seconds. Four more participants either skipped an entire scale or withdrew before completion. Three participants did not specify their ages and, therefore, were dropped in case they were younger than 18 years old. Although some authors recommend dropping participants who are missing more than 10% of their data when using multivariate statistical analyses (Mertler & Vannatta, 2005), the researcher decided to take a more conservative approach and drop those who were missing more than 5% of

their total data (independent and dependent variables only) and those missing more than 5% of the items on a single scale. Of the remaining 430 participants, 47 participants were dropped for these reasons. The remaining 383 participants provided enough information to be included in analysis.

Selection criteria. In order to be eligible for the present study, participants must have been enrolled at least part-time at Ball State University as an undergraduate student at the time of the study. Participants needed to be 18 years of age or older at the time of data collection.

Recruitment. Participants were recruited from Ball State University's undergraduate student population. Recruitment occurred via electronic mail (e-mail). Upon receiving approval from the Institutional Review Board (IRB), an e-mail was sent to all undergraduate students describing the purpose of study, procedure, inclusion criteria, incentives, and a link to the study. Another e-mail reminding students of the study was sent two weeks later. Both e-mails included a link to the study on InQsit (Fortiede & Draper, 2009).

Incentives. Participants had the option to either be randomly selected for one of four $20 Amazon gift cards or to receive partial course credit if enrolled in a CPSY course. Random selection of gift cards was done with a true random number generator (Trinity College, 2011) and the four participants were notified via email upon selection.

Demographic variables. Of the 383 participants included in the analysis, there were 277 females (72.3%) and 106 males (27.7%). The majority were Caucasian (n = 354; 92.4%), 15 identified as African American (3.9%), 5 identified as Asian American (1.3%), 2 identified as Latino/Latina (0.5%), 2 identified as Native American (0.5%), 1 identified

as Asian (0.3%), 1 identified as Indian American (0.3%), 1 identified as mixed/African American (0.3%), 1 identified as multiracial (0.3%), and 1 person did not respond (0.3%). A summary of home state, country, and primary language spoken in participants' homes can be found in Table 1. Participants' ages ranged from 18 to 65 (mean = 21.86, *SD* = 5.57). Participants self-reported GPA ranged from 0.000 to 5.860 (*n* = 380; mean = 3.276, *SD* = .511). The majority of participants were enrolled full-time (*n* = 368, 96.1%), while 14 participants were enrolled part- time (3.7%), and 1 person did not specify enrollment status. With regard to class standing, 68 participants reported they were freshmen (17.8%), 89 reported they were sophomores (23.2%), 116 reported they were juniors (30.3%), 109 reported they were seniors (28.7%), and 1 person did not report class standing. It should be noted that the participants who did not report enrollment status and class standing were different people. Therefore, the researcher obtained information on either class standing or enrollment status for all 383 participants included in the analysis. Since the recruitment e-mails were only sent to undergraduates at Ball State, the researcher is confident that the selection criteria (i.e., undergraduates who were enrolled at least part-time) were met for this sample.

Of the 383 participants, 359 reported they had decided on a major (93.7%), 11 reported they had not decided on a major (2.9%), and 13 participants did not respond (3.4%). A summary of participants' majors can be found in Table 2. The majority of participants reported they did not have a diagnosed disability (*n* = 335, 87.5%), while 46 participants (12%) responded that they did have a disability. A summary of disability types reported can be found in Table 3.

Table 1

Home Characteristics of Participants

Variable	*n* (%)
Home State (total *n* of responses)	378
Indiana	321 (84.9)
Ohio	31 (8.2)
Illinois	6 (1.6)
Kentucky	2 (0.5)
Colorado	2 (0.5)
N. Carolina	2 (0.5)
Texas	2 (0.5)
Oregon	1 (0.3)
Maryland	1 (0.3)
Wisconsin	1 (0.3)
Michigan	1 (0.3)
New York	1 (0.3)
Missouri	1 (0.3)
Nevada	1 (0.3)
Florida	1 (0.3)
California	1 (0.3)
Massachusetts	1 (0.3)
Virginia	1 (0.3)
Did not indicate	1 (0.3)
Home Country	383
United States of America	375 (97.9)
Japan	1 (0.3)
China	1 (0.3)
Germany	1 (0.3)
United Kingdom	1 (0.3)
No response	4 (1.0)
Primary Language Spoken in Home	383
English	370 (96.6)
Bilingual	2 (0.5)
Japanese	1 (0.3)
Chinese	1 (0.3)
Spanish	1 (0.3)
Polish	1 (0.3)
No response	4 (1.8)

Table 2

Major Areas of Study

Major	*n* (% of total responses)
College of Science and Humanities	241 (59.5)
Psychology	88 (21.7)
Social Work	22 (5.4)
Criminal Justice	14 (3.5)
Health Science	13 (3.2)
Sociology	9 (2.2)
Speech Pathology	9 (2.2)
Biology	6 (1.5)
History	5 (1.2)
Other 43 majors ≤ 1%	1-4 (0.2-1.0)
Miller College of Business	27 (5.7)
Accounting	7 (1.5)
Marketing	5 (1.1)
Other 8 majors ≤ 1%	1-4 (0.2-1.0)
College of Communication, Information, and Media	37 (7.8)
Telecommunications	14 (3.0)
Communication Studies	5 (1.1)
Journalism	5 (1.1)
Public Relations	5 (1.1)
Other 4 majors ≤ 1%	1-4 (0.2-1.0)
College of Applied Sciences and Technologies	53 (11.2)
Nursing	24 (5.1)
Other 12 majors ≤ 1%	1-4 (0.2-1.0)
College of Architecture and Planning	11 (2.3)
All 3 majors ≤ 1%	3-4 (0.7-1.0)
Teachers College	43 (9.1)
Elementary Education	30 (6.3)
Dual in Elementary and Special Education	7 (1.5)
Other 4 majors ≤ 1%	1-3 (0.2-0.7)
College of Fine Arts	17 (3.6)
All 12 majors ≤ 1%	1-3 (0.2-0.7)

Interdepartmental Majors	12 (2.5)
All 7 majors ≤ 1%	1-3 (0.2-0.7)
Specified Major not found	2 (0.4)
General Studies	13 (2.7)
Double Majors	38 (8.0)
Triple Majors	4 (0.8)

**Note. Total responses = 405 (number of single majors +1/2 double majors + 2/3 triple majors)*

Table 3

Types of Disabilities

Disability Type	*n* (%)
Physical	17 (37)
Hearing loss/impairment	4 (9)
Nearsightedness	2 (4)
Asthma	2 (4)
Kyphosis	1 (2)
Arthritis	1 (2)
Juvenile Rheumatoid Arthritis	1 (2)
Optic Atrophy	1 (2)
Celiac Disease	1 (2)
X-Ocular Albinism	1 (2)
Hip/Knee problem	1 (2)
Degenerative Ankle Disease	1 (2)
Allergies	1 (2)
Psychological	6 (13)
Asperger Syndrome	2 (4)
Panic/Anxiety Disorder	1 (2)
Bipolar Disorder	1 (2)
Depression	1 (2)
PTSD	1 (2)
Cognitive	18 (39)
Learning Disability	5 (11)
AD/HD	4 (14)
Reading Comprehension	2 (4)
Dyslexia	2 (4)
Traumatic Brain Injury	1 (2)
Narcolepsy	1 (2)
Did not indicate	5 (11)
Total	46 (100)

Participants were asked their employment status, however they were not given the option to select "not employed." A large number of participants left this question blank (*n* = 49, 12.8%), possibly for this reason. Of the 334 participants who did respond, the majority reported working part-time (*n* = 217, 65.0%), 95 reported work-study employment (28.4%), and 22 (6.6%) reported working full-time (35 hours or more per week). Many participants either did not report the number of hours worked or entered 0 for this question. However, for several others, the number of hours worked appeared as an extremely large number (e.g., 39517.19) or an extremely small number (e.g., 1.5E-17). Therefore, these instances were not included in the descriptive analysis for hours worked. Data for only 229 participants who reported the number of hours worked were usable. Of these participants, the minimum reported was 1 hour per week and the maximum was 45 hours per week (mean = 15.84, *SD* = 9.46).

Finally, participants were given the definition of a first-generation college student according to this author and asked whether or not they identify as such. A total of 123 participants (32.11%) identified as first-generation college students, while 260 (67.89%) reported they did not identify as first-generation college students (i.e., they are considered here as continuing-generation college students). Participants were also asked to provide the highest level of education for the person(s) by whom they were raised. A total of 38.4% (*n* = 147) reported this person(s) to have less than a 2-year degree, while the remaining 61.6% (*n* = 236) reported this person(s) to have graduated with at least a 2-year degree. A summary of the level of education by parents/caregivers can be found in Table 4.

Table 4

Highest Education Level Completed by Participants' Caregiver(s)

Education Level	*n*	(%)
Some high school	8	(2.1)
High school diploma/GED	75	(19.6)
Some college	64	(16.7)
2-year degree (e.g., Associates/Technical)	52	(13.6)
4-year degree (e.g., Bachelor's)	106	(27.7)
Some graduate school	6	(1.6)
Master's degree	59	(15.4)
Doctoral degree	13	(3.4)
Total	383	(100.0)

Design

The present study was a descriptive field study because data were gathered in the field (i.e., college campus) rather than in a laboratory, there was not random assignment to groups, and no variables were manipulated (Heppner, Wampold, & Kivlighan, 2008). According to Heppner et al., this design is low in internal validity but high in external validity. That is, the variables occur naturally with no manipulation and little control, but the results have high generalizability to the population of interest.

Procedure

All instruments were administered online through InQsit (Fortriede & Draper, 2009). Those who chose to participate were directed to an informed consent page by selecting the link in the recruitment e-mail(s) (see Appendix A). Participants were asked to acknowledge that they had read the informed consent (Appendix B) and agree to the terms of the study, including the voluntary nature and right to withdraw at any time. Upon agreement, participants were directed to complete items developed by this researcher (see Appendix C) for demographic information.

Participants were then asked to complete three questionnaires. It was expected that participation would take approximately 15-20 minutes. According to response duration, the average time to respond was 16 minutes. Participants were given a debriefing form (see Appendix D) at the end of the survey, which included thanking them for their participation, the principle investigator's e-mail address, and instructions to be included in the selection for gift cards or for their names to be sent to instructors. Participants were also invited to e-mail the principle investigator with any questions or

concerns, or if they wish to receive a summary of the results once the study was complete.

Instruments

Demographic questionnaire. Demographic information was collected using a demographic questionnaire developed by the current researcher (Appendix C). Participants were asked to provide the information reported in the "demographic variables" section above.

Financial stress. Financial stress, which was one of the independent variables in the present study, was measured using the InCharge Financial Distress/Financial Well-Being Scale (IFDFW; Prawitz et al., 2006). Permission was granted from the author for use of this instrument for research purposes. The IFDFW is based on research that spanned more than 2 decades (Prawitz et al.). The first version of the instrument was based on 58 concepts related to financial stress and well-being, drawn from just over a decade of research (Prawitz et al.). According to the authors, these concepts were then narrowed down into a list of 10 concepts using a three-phase Delphi method (i.e., panel of experts). The result was a 10-item instrument, which was administered to members of the general population (n = 1,097) and a financially distressed sample (n = 509). The final version of the IFDFW consists of 8 items and measures respondents' perceptions of financial distress and financial well-being along a continuum (Appendix E). Responses are given on a 10-point Likert-type scale with low numbers indicating high financial distress and high numbers indicating high financial well-being. Factor analysis revealed factor loadings on a single factor (range = .833 to .926), indicating that a total scale score can be used to represent a single construct for this instrument (Prawitz et al.). Responses

are summed and then divided by 8, with decimals retained (Prawitz et al.). The authors provided the following categories: 1.0-4.0 (high financial distress/low financial well-being); 4.1-6.9 (average financial distress/average financial well-being); 7.0-10.0 (low financial distress/high financial well-being). The authors also provided 10 descriptive statements for each mean score value (i.e., 1.0, 2.0, 3.0, etc.). Examples of these statements include: 1.0 = Overwhelming financial distress/lowest financial well-being; 4.0 = high financial distress/poor financial well-being; 7.0 = low financial distress/good financial well-being. For the purpose of this study, the categories provided by the authors were used for analysis.

Prawitz et al. (2006) provided evidence of reliability and validity for the IFDFW. Internal consistency was reported with Cronbach's Alpha at .956, exceeding the desired standard for what the authors considered to be robust. Internal consistency for the present study was comparable (α = .937) to the internal consistency found in the normed population. In order to establish content validity, the authors used prior theory and research to identify the concepts within the construct of financial stress/well-being and confirmed this with expert review. In order to establish concurrent criterion validity, the authors required that low scores on the IFDFW identified adults who had contacted a consumer credit counseling agency, which they determined was indicative of financial stress.

Academic self-efficacy. In order to measure academic self-efficacy, one of the dependent variables in the present study, participants were given the College Self-Efficacy Instrument (CSEI; Solberg et al., 1993) via InQsit. According to Solberg et al., expert review of a 40-item pool resulted in 20 items in the initial version of the CSEI.

Factor analysis supported retention of 19 of these items (Solberg et al.). Therefore, the final version of the CSEI (Appendix F) is a 19-item instrument that uses an 11-point Likert-type scale, ranging from 0 (*not at all confident*) to 10 (*extremely confident*). An example item is: "do well on your exams." The instrument consists of three subscales: social, course, and roommate. The Social subscale measures one's self-efficacy in the social aspects of college. The eight items ask about participants' confidence in their abilities to do things like ask questions in class, talk to professors, participate in class discussions, and make new friends in college. The Course subscale measures one's self-efficacy related to coursework. The seven items ask about participants' confidence in their abilities to do things like take notes, study, write papers, and do well on exams. The Roommate subscale measures one's self-efficacy related to living with a roommate. The four items ask about participants' confidence in their abilities to get along and socialize with roommates and divide space and chores. Responses to the subscales are averaged to provide a total score (Gore, 2006). Higher scores indicate higher academic self-efficacy.

Both validity and reliability for the CSEI have been established. Strong internal consistency with college students has been found in multiple studies (α = .92, Gore, Leuwerke, & Turley, 2006; α = .93, Solberg et al., 1993). Internal consistency for the present study was found to be comparable (Total scale = .907; Course subscale = .872; Roommate subscale = .886; Social subscale = .881) to these studies. Discriminant validity has been found between the CSEI and other measures (Gore, 2006; Solberg et al.). Concurrent validity has been found between the CSEI and other measures of academic self-efficacy and related constructs (Gore, 2006; Gore et al., 2006; Solberg et al.). Predictive validity has also been established for the CSEI (Gore et al.). Finally, the

CSEI has been found to be valid and reliable with college students regardless of year in school, gender, or differences in acculturation (i.e., for Hispanic students; Solberg et al.).

Career decision self-efficacy. The second dependent variable in the present study was measured using the Career Decision Self-Efficacy Scale-Short Form (CDMSE-SF; Betz & Taylor, 2001). The original instrument was developed based on Bandura's conception of self-efficacy as well as Crites' model of career maturity, which contains five career choice competencies (Betz & Taylor). The original scale contained five subscales to match these competencies: 1) accurate self-appraisals; 2) gathering occupational information; 3) goal selection; 4) making plans for the future; and 5) problems-solving. The original scale utilized an 11-point Likert-type scale (0 = *No confidence* to 10 = *Complete confidence*). However, according to Betz and Taylor, evidence supports the use of a 5-point Likert type scale (1 = *No confidence* to 5 = *Complete confidence*). In addition, the original scale contained 10 items per subscale (total of 50 items). However, the CDMSE-SF only contains 5 items per subscale (total of 25 items; Appendix G). Responses on the CDMSE-SF are summed with a maximum of 250 (50 per subscale) and higher scores indicate greater career decision self-efficacy.

Internal consistency for the CDMSE-SF has been found to range from .73 (self-appraisal) to .83 (goal selection) and .94 for the total scale (Betz, Klein, & Taylor, 1996). Internal consistency in the present study was found to be comparable to Betz et al.'s reported reliabilities (Total scale = .946; Self-appraisal subscale = .804; Occupational information subscale = .766; Goal selection subscale = .830; Planning subscale = .789). Betz and Taylor (2001) reported on several studies that provided adequate evidence for content, concurrent, discriminant, predictive, criterion-related, and construct validities of

the CDMSE and CDMSE-SF. A few noteworthy studies include evidence of concurrent validity with both the Career Beliefs Inventory (Luzzo & Day, as cited in Betz & Taylor) and behavioral indicators of career decision (e.g., Taylor & Popma, as cited in Betz & Taylor, 2001), and evidence of discriminant validity with the Fear of Commitment Scale, which measures a chronic, trait-like component to indecision that is related to anxiety (Betz & Serling, as cited in Betz & Taylor).

Data Analysis

All data analyses for the present study were done using the Statistical Package for the Social Sciences (SPSS). Demographic variables were examined for means, standard deviations, and differences between all variables in order to check for differences in levels of the dependent variables based on these variables rather than the independent variables. Giancola et al. (2008) found year in school to be a covariate with generational status for differences in the specific academic variables measured in that study. However, Solberg et al. (1993) reported no difference in academic self-efficacy, as measured by the CSEI, based on year in school. Therefore, it was unknown whether year in school would be a covariate for the dependent variables in the present study. As a result, a one-way Analysis of Variance (ANOVA) was conducted as a preliminary analysis with year in school as the independent variable with four levels (freshman, sophomore, junior, senior) in order to check for Homogeneity of Variance using Levene's Test (Kinnear& Gray, 2004). Levene's Statistic was not significant for either dependent variable ($p > .05$), which indicated that there was no difference in the dependent variables based on year in school and all the data could be analyzed together.

The hypotheses that were tested in the present study were:

H1: First-generation college students will express lower levels of academic self-efficacy and career decision self-efficacy than continuing-generation college students.

H2: College students with high financial stress will express lower levels of academic self-efficacy and career decision self-efficacy than those with low financial stress.

Following the preliminary analyses, the hypotheses were tested using a 2 (generational status) x 3 (financial stress) between-subjects factorial MANOVA (Tabachnick & Fidell, 2001) with academic self-efficacy and career decision self-efficacy as the two dependent variables. According to Tabachnick and Fidell, a between-subjects factorial MANOVA is most appropriate for the present study because there were multiple independent and dependent variables, each independent variable had more than one level, the research questions were asking about group differences in levels of the dependent variables, and the dependent variables were theoretically correlated (Lent et al., 1994). The MANOVA tested each hypothesis by looking for main effects between the independent and dependent variables and also interaction effects between the independent variables (Tabachnick & Fidell). Specifically, the MANOVA tested for: 1) main effects between the two levels of generational status and the two dependent variables of academic self-efficacy and career decision self-efficacy; 2) main effects between the three levels of financial stress and the two dependent variables of academic self-efficacy and career decision self-efficacy; and 3) interaction effects between generational status

and financial stress on the two dependent variables (although this was not a specific hypothesis of the present study).

Generational status was dichotomized into the categories of first-generation or continuing-generation college students. Financial stress was gathered as a continuous variable (scores of 1.0-10.0). Prior to analysis, the researcher classified the data into the following 3 groups, as recommended by Prawitz et al. (2006): 1.0-4.0 (high financial distress/low financial well being); 4.1-6.9 (average financial distress/average financial well-being); 7.0-10.0 (low financial distress/high financial well-being). Prior to analysis, the researcher planned to use descriptive discriminant analysis as a follow-up to a significant MANOVA, if significance was found (Kinnear & Gray, 2004).

Chapter Four

Results

Hypotheses

The hypotheses tested in the present study were:

H1: First-generation college students will express lower levels of academic self-efficacy and career decision self-efficacy than continuing-generation college students.

H2: College students with high financial stress will express lower levels of academic self-efficacy and career decision self-efficacy than those with low financial stress.

The results of the analyses provided mixed support for the hypotheses. That is, the first hypothesis was not supported but the second hypothesis was supported. In order to be able to provide greater clarity regarding the reasons for these results, as well as address limitations of the present study, several post-hoc analyses were conducted. The results of the planned analyses as well as the post-hoc analyses will be provided in the following sections.

Planned Analyses

The researcher utilized cross-tabulation to obtain more detailed information regarding the number of participants within various demographic categories by

independent variable. The number of participants in each category by independent variable can be found in Table 5.

Of the first-generation college students, 69% were females and 31% were males. With regard to ethnicity, 92% were Caucasian, 6% were African American, 2% were Asian American, and 1% identified his/her ethnicity as other. With regard to class standing, 17% were freshmen, 26% were sophomores, 31% were juniors, and 26% were seniors. The majority (95%) was enrolled full-time and 92% reported they did not have a disability, while 8% reported they did have a disability.

Of the continuing-generation college students, 74% were females and 26% were males. The majority identified their ethnicity as Caucasian (93%), while 3% were African American, 1% was Asian American, 1% was Latino/Latina, and 2% identified as other. With regard to class standing, 18% were freshmen, 22% were sophomores, 30% were juniors, and 30% were seniors. The majority was enrolled full-time (97%) compared with 3% enrolled part-time. The majority reported they did not have a disability (86%), while 14% reported they did have a disability.

Of those with high financial stress, 80% were females and 20% were males. With regard to ethnicity, 96% were Caucasian, 2% were African American, 1% was Asian American, and 1% identified as other. A total of 18% were freshmen, 26% were sophomores, 26% were juniors, and 30% were seniors. The majority was enrolled full-time (97%), while 3% were enrolled part-time. The majority reported no disability (87%), while 13% reported that they had a disability.

Table 5

Cross-tabulations of Demographics by Independent Variable

	Generational Status		Financial Stress		
	First	Continuing	High	Average	Low
Demographic Variables	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Gender (total *n* reported)	123	260	137	167	79
Females	85 (69)	192 (74)	110 (80)	116 (69)	51 (65)
Males	38 (31)	68 (26)	27 (20)	51 (31)	28 (35)
Ethnicity (total *n* reported)	123	259	136	167	79
Caucasian	113 (92)	241 (93)	130 (96)	151 (90)	73 (92)
African American	7 (6)	8 (3)	3 (2)	8 (5)	4 (5)
Asian American	2 (2)	3 (1)	1 (1)	3 (2)	1 (1)
Latino/Latina	0 (0)	2 (1)	0 (0)	2 (1)	0 (0)
Other	1 (1)	5 (2)	2 (1)	3 (2)	1 (1)
Class Standing (total *n* reported)	123	259	137	166	79
Freshmen	21 (17)	47 (18)	25 (18)	21 (13)	22 (28)
Sophomores	32 (26)	57 (22)	35 (26)	37 (22)	17 (22)
Juniors	38 (31)	78 (30)	36 (26)	58 (35)	22 (28)
Seniors	32 (26)	77 (30)	41 (30)	50 (30)	18 (23)
Enrollment Status (total *n* reported)	122	260	137	166	79
Full-time student	116 (95)	252 (97)	133 (97)	159 (96)	76 (96)
Part-time student	6 (5)	8 (3)	4 (3)	7 (4)	3 (4)
Disability Status (total *n* reported)	123	258	136	166	79
No disability	113 (92)	222 (86)	118 (87)	145 (87)	72 (91)
Disability	10 (8)	36 (14)	18 (13)	21 (13)	7 (9)

Of those with average financial stress, 69% were females while 31% were males. The majority was Caucasian (90%), while 5% were African American, 2% were Asian American, 1% was Latino/Latina, and 2% identified as other. With regard to class standing, 13% were freshmen, 22% were sophomores, 35% were juniors, and 35% were seniors. The majority was enrolled full-time (96%), while 4% were enrolled part-time. The majority reported no disability (87%), while 13% reported that they had a disability.

Of those with low financial stress, the majority were females (65%) and 35% were males. Most were Caucasian (92%), while 5% were African American, 1% was Asian American, and 1% identified as other. With regard to class standing, 28% were freshmen, 22% were sophomores, 28% were juniors, and 23% were seniors. Most were enrolled full-time (96%), compared to 4% enrolled part-time. The majority reported that they did not have a disability (91%), while 9% reported they did have a disability.

A summary of the number of participants in each category for the two independent variables in the present study (generational status and financial stress) can be found in Table 6. There were far fewer participants who identified as both first-generation college students and having low financial distress (4%) than there were first-generation students with average (14%) or high (14%) financial distress or continuing-generation students with low (17%), average (29%), or high (22%) financial distress. Regardless of generational status, only 21% of participants in the present study reported low financial stress whereas 44% reported average financial stress and 36% reported high financial stress. Additionally, fewer students identified as being first-generation college students (32%) than continuing generation college students (68%).

Table 6

Number of Participants per Independent Variable

	Generational Status Categories		
	First-Generation	Continuing-Generation	
Financial Stress Categories	*n* (%)	*n* (%)	Total
High	54 (14)	83 (22)	137 (36)
Average	55 (14)	112 (29)	167 (44)
Low	14 (4)	65 (17)	79 (21)
Total	123 (32)	260 (68)	383 (100)

As described in the previous chapter, means and standard deviations of the demographic variables were examined for errors, and differences between variables were examined with multiple one-way analyses of variance (ANOVAs) to check for differences in levels of the dependent variables (academic and career decision self-efficacy) based on these variables rather than the independent variables. The results of these ANOVAs revealed no significant differences in levels of academic and career self-efficacy due to gender (CSEI: F (1,2.817) = .037, $p > .05$; CDMSE-SF: F (1,311.278) = 1.346, $p > .05$), age (CDMSE-SF: F (25,290.229) = 1.277, $p > .05$), or ethnicity (CSEI: F (4,139.665) = 1.865, $p > .05$). It should be noted that Levene's Statistic was significant for the CSEI when analyzing age and for the CDMSE-SF when analyzing ethnicity, indicating that the assumption of equal variances was violated for these two variable combinations (i.e., age and academic self-efficacy; ethnicity and career self-efficacy). Therefore, a non-parametric test (Kruskal-Wallis) was used, as recommended by Kinnear and Gray (2004).

The results of the non-parametric test revealed that neither variable was significant (Age and CSEI: Chi-square = 31.831, $p > .05$; Ethnicity and CDMSE-SF: Chi-square = 3.771, $p > .05$), indicating that age did not have a significant relationship to academic self-efficacy and ethnicity did not have a significant relationship to career self-efficacy.

Multiple Analysis of Variance (MANOVA) Results. In order to insure that the assumptions of MANOVA were met, the researcher examined Quantile-Quantile (Q-Q) plots, which test for normal distribution, and used Box's M, which tests for equal variance across groups. Q-Q plots indicated the data were normally distributed for both dependent variables (see Figures 1 and 2). Using the recommendations by Tabachnick

Figure 1. Q-Q plot used to test the assumption of normal distribution for the CSEI (measure of academic self-efficacy). Data fit the normal distribution line and, therefore, the assumption was met for this variable.

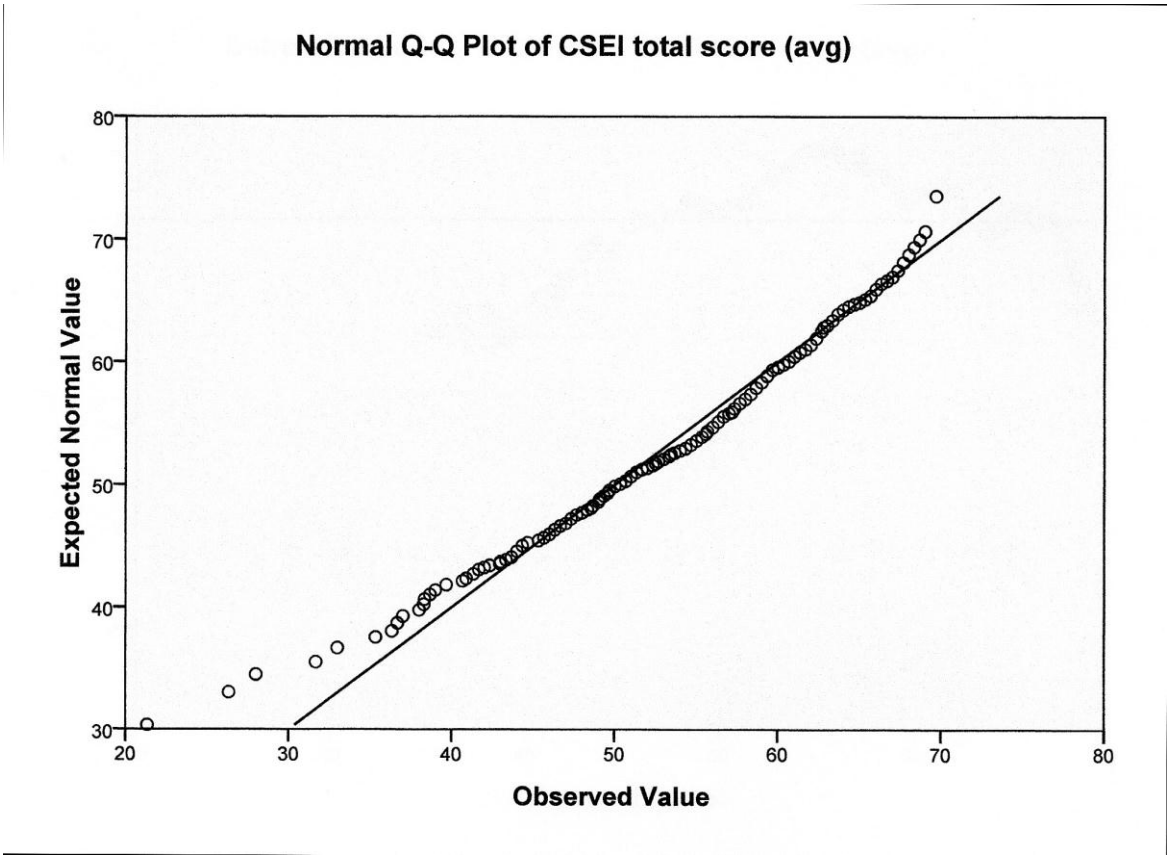
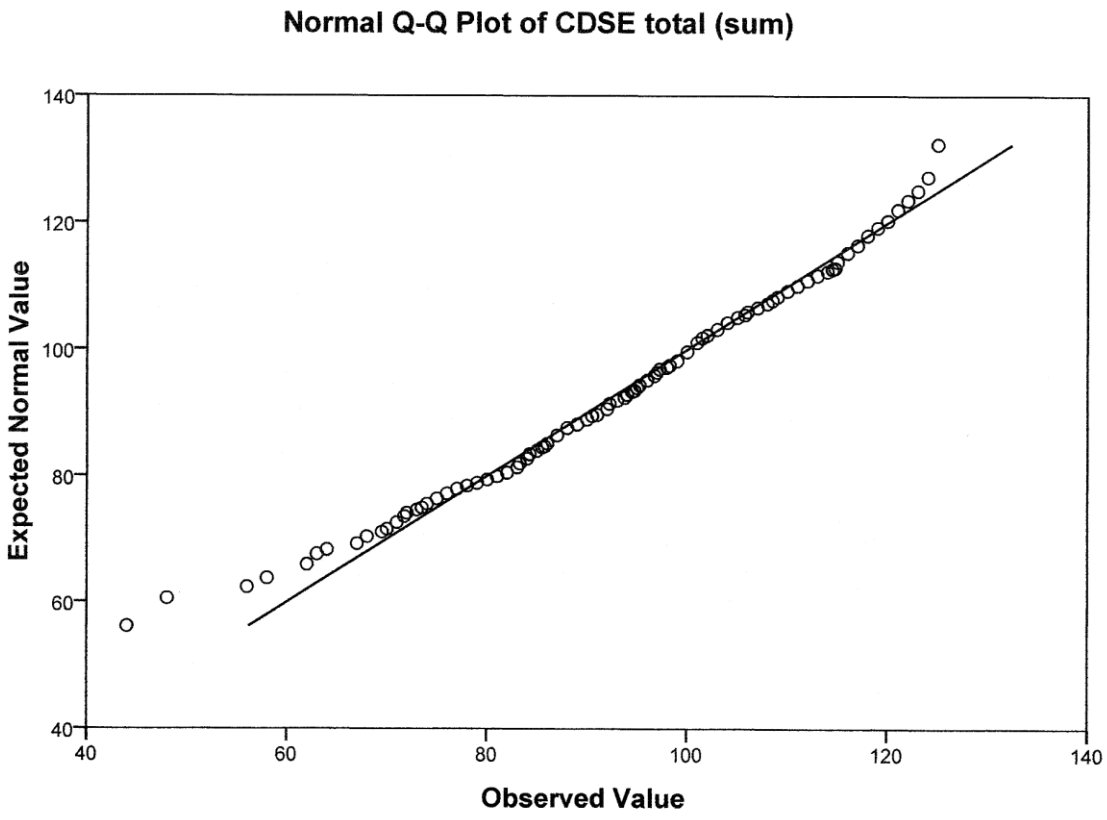


Figure 2. Q-Q plot used to test the assumption of normal distribution for the CDMSE-SF (measure of career decision self-efficacy). Data fit the normal distribution line and, therefore, the assumption was met for this variable.



and Fidell (2001), Box's M was not significant (M = 33.74, $p > .001$). Therefore, the assumption of equal variance was met. Finally, the dependent variables in the present study (academic and career self-efficacy) were found to be moderately correlated (Pearson correlation = .645, $p < .01$), which supports assumptions of Social Cognitive Career Theory (SCCT; Lent et al., 1994). This also confirmed that a MANOVA was the appropriate statistical procedure for this study.

Using SPSS, a 2 (generational status) x 3 (financial stress) MANOVA was conducted in order to test the hypotheses that 1) first-generation college students will express lower levels of academic and career decision self-efficacy than continuing-generation college students and 2) college students with high financial stress will express lower levels of academic and career decision self-efficacy than those with low financial stress.

The results revealed a non-significant main effect for generational status (Wilks' λ = .995, F (2, 376.00) = .961, $p > .05$, partial eta squared = .005, observed power = .217), a significant main effect for financial stress (Wilks' λ = .956, F (4, 752.00) = 4.318, $p <$ .01, partial eta squared = .022, observed power = .931), and a non-significant interaction effect (Wilks' λ = .996, F (4, 752.00) = .331, $p > .05$, partial eta squared = .002, observed power = .125). Contrary to the first hypothesis, generational status was not found to significantly influence career and academic self-efficacy. Consistent with the second hypothesis, financial stress was found to significantly influence career and academic self-efficacy. There was no significant interaction between financial stress and generational status in relation to academic and career self-efficacy.

Discriminant Analysis. As a follow-up to the significant MANOVA results, descriptive discriminant function analysis (DDA) was used to identify where differences were found within the financial stress groups. Unlike MANOVA, DDA does not assess significant differences between groups but rather creates a discriminant function score that is used to maximize separation of participants between groups (Kinnear & Gray, 2004). In this case, the grouping variable used was financial stress and the scores used to derive the discriminant function were those from the two measures of self-efficacy (i.e., the dependent variables in this study). DDA was used to differentiate low, average, and high financial stress scores. The results of DDA tell us which variable(s) add to this differentiation and whether either or both measures of self-efficacy were correlated with scores on the grouping variable. As recommended by Tabachnick and Fidell (2001), a pre-determined cutoff of .320 was used to interpret correlations between the individual variables and the discriminant function (i.e., structure matrix).

As expected, based on the results of the MANOVA, Wilks' λ was significant (.925, $p < .001$), indicating that at least one of the dependent variables in this study contributed significantly to the grouping variable of financial stress. The standardized canonical discriminant function coefficient for scores on the academic self-efficacy measure (CSEI = .760) was higher than the standardized canonical discriminant function coefficient for scores on the career self-efficacy measure (CDMSE-SF = .330), indicating that the former was more associated with the difference between groups (i.e., the discriminant function) than the latter. However, looking at the structure matrix, both variables were above the recommended cutoff score of .320 (CSEI = .966; CDMSE-SF = .804). This indicates that both academic self-efficacy and career self-efficacy were

important in discriminating between levels of financial stress that were grouped into low, average, and high financial stress categories.

In order to know the direction of association between financial stress and the two measures of self-efficacy, group means were examined. The results indicated that higher financial stress was associated with lower academic self-efficacy and lower career self-efficacy (Table 7).

Post-hoc Analyses

There were three post hoc analyses conducted. The rationale and results of each of these post hoc analyses are presented.

Multiple Analysis of CoVariance (MANCOVA). In order to address the limitation of dichotomizing the financial stress data, rather than analyzing financial stress as a continuous variable, I conducted a MANCOVA with the continuous variable of financial stress as the covariate. As with the planned MANOVA, Box's M was not significant (M = 4.163, $p > .001$) and the data were normally distributed. The results revealed a non-significant main effect for generational status (Wilks' $\lambda = .995$, F (2, 379.00) = .917, $p >$ .05, partial eta squared = .005, observed power = .208) and a significant main effect for financial stress (Wilks' $\lambda = .937$, F (2, 379.00) = 12.770, $p < .001$, partial eta squared = .063, observed power = .997), indicating that financial stress was significantly related to career self-efficacy and academic self-efficacy, whereas generational status was not significantly related to these variables. Examination of parameter estimates revealed that the slopes were positive and significant for academic self-efficacy (Beta = .971, $p < .001$) and career self-efficacy (Beta = 1.429, $p < .001$). This indicated that the higher one's financial stress was, the lower one's academic self-efficacy and career self-efficacy were.

Table 7

Financial Stress Group Means

	CSEI (Academic S-E)		CDMSE-SF (Career Decision S-E)	
Financial Stress	*n*	*M* (SD)	*n*	*M* (SD)
High	137	53.28 (9.94)	137	94.58 (16.47)
Average	167	56.45 (7.30)	167	98.23 (13.51)
Low	79	59.41 (7.67)	79	103.86 (14.73)
Total	383	55.93 (8.69)	383	98.09 (15.21)

These results were similar to the results of the MANOVA that was conducted without using the continuous variable of financial stress as a covariate.

Participants per group. The researcher planned to recruit a minimum of 30 participants per group (i.e., cell). While the total number of participants far exceeded the proposed 180 participants (there were 383 total participants included in the results for this study), the total number of participants in each cell did not reach the desired minimum. That is, there were only 14 participants who identified as first-generation college students with low financial stress, rather than the 30 participants per cell that were desired (see Table 6, previous). Therefore, I conducted a MANOVA with this cell excluded from the analysis. The results revealed a non-significant main effect for generational status (Wilks' $\lambda = .996$, F (2, 363.00) = .776, $p > .05$, partial eta squared = .004, observed power = .182), a significant main effect for financial stress (Wilks' $\lambda = .932$, F (4, 726.00) = 6.456, $p < .001$, partial eta squared = .034, observed power = .991), and a non-significant interaction effect (Wilks' $\lambda = .999$, F (2, 363.00) = .264, $p > .05$, partial eta squared = .001, observed power = .091). The results were the same as the primary analysis when this cell was excluded.

Defining generational status. The final post-hoc analysis was conducted to test the effects of the definition used in this study for generational status. Traditionally, the definition has included an objective measure of parental education rather than a more subjective definition of students' perceptions of themselves as first- or continuing-generation college students. Therefore, I asked participants to report the highest level of education completed by the person(s) who raised them. The data were recoded into a new variable based on whether the highest level of education reported was below a 2-year

college degree (first-generation) or equal to or above a 2-year college degree (continuing-generation).

Using this definition, more participants were identified as first-generation college students (n = 147) compared with the subjective definition used in the primary analysis (n = 123). In order to see if a MANOVA would reveal a significant main effect for generational status using the more traditional definition, the planned analyses were conducted again using the recoded variable.

Box's M was not significant (M = 28.293, $p > .001$) and the data were normally distributed. The results revealed a non-significant main effect for generational status (Wilks' $\lambda = .994$, F (2, 376.00) = 1.227, $p > .05$, partial eta squared = .006, observed power = .267), a significant main effect for financial stress (Wilks' $\lambda = .943$, F (4, 752.00) = 5.642, $p < .001$, partial eta squared = .029, observed power = .980), and a non-significant interaction effect (Wilks' $\lambda = .993$, F (4, 752.00) = .635, $p > .05$, partial eta squared = .003, observed power = .210). Thus, changing the definition of generational status did not produce different results than the results from the previous analyses.

Chapter Five

Discussion

Summary and Interpretation of Major Findings

Results from the present study provided support for the second hypothesis, but not the first hypothesis. That is, no significant differences were found in levels of academic self-efficacy or career self-efficacy for first-generation college students as compared to continuing-generation college students. However, there was a difference in levels of both academic and career decision self-efficacy for those with varying levels of financial stress. Specifically, the participants with higher levels of financial stress also reported lower academic self-efficacy and career self-efficacy, although the difference was greatest for academic self-efficacy.

In order to determine if these findings were due to actual trends in the sample or due to error, three post-hoc analyses were conducted. The first was a MANCOVA. This was done to retain the variance that was collected with the original data as a continuous variable and to eliminate the threat of violating assumptions of the statistical test (Shadish et al., 2001b) due to the low *p*-value for Box's M (personal communication with W. H. Finch, March 22, 2011). The result of this analysis was the same as the original analysis, indicating that the first hypothesis was not supported but the second was supported. The results of the MANCOVA were not surprising given the findings of the planned

MANOVA and that the purpose of a MANCOVA in this instance was to reduce Type II error (i.e., finding no difference where differences exist). Because a difference was found with the planned MANOVA with regard to financial stress, the MANCOVA simply served to support this finding. There would have been no change in the findings related to generational status because this variable remained categorical as with the planned MANOVA.

The second and third post-hoc analyses were conducted in order to address two potential problems with the generational status variable. The first analysis was done to address the low numbers of participants who identified as both first-generation college students and having low financial stress. I had planned to obtain a minimum of 30 participants in each category or cell, however there were only 14 participants that fit the first-generation, low stress category. This may have led to a decrease in power too low to detect effects. Therefore, these participants were eliminated from the analysis and then the MANOVA was conducted once more. There was no change in the results, which supported the original findings that generational status was unrelated to academic self-efficacy and career decision self-efficacy.

The final post-hoc analysis was conducted due to the variation of definitions in the literature for first-generation college students (e.g., Chen, 2005; Strage, 1999; Wang & Castañeda-Sound, 2008). I originally sought to address limitations in the way that previous researchers defined first-generation college students by using a new definition of first-generation college students (i.e., a more subjective definition). Therefore, it was important to consider previous definitions used in the literature as they pertained to this sample. Perhaps the most common and acceptable method for determining generational

status in past research was by using students' parental education level as the determinant for generational status (e.g., Horn & Nuñez, 2000; Oliver, Rodriguez, & Mickleson, 1985; Wohlgemuth et al., 2006-2007). Because I asked for the highest level of education by the person(s) who raised each participant, this information was used as the determinant for generational status in this final post hoc analysis (rather than using participants' self-report of their status, as was done in the primary analysis). Those who were raised by someone with at least a 2-year college degree were considered continuing-generation college students. All others were first-generation college students.

Interestingly, there were more first-generation college students identified using the traditional definition than using the more subjective definition. This may suggest that students may have a significant person in their life beyond a parent who can serve as a role model for college-going behaviors. The definitions in the literature thus far have ignored this possibility and assumed that only parents play a significant role in students' college-going experiences. Regardless, even with the more traditional definition of first-generation college students that included a larger sample size for this group, no differences were found in levels of academic self-efficacy and career self-efficacy.

This is contrary to previous findings (e.g., Grodsky & Riegle-Crumb, 2010; McCarron & Inkelas, 2006; Messersmith & Schulenberg, 2008). Similar to the present study, Vuong et al. (2010) found no difference in academic self-efficacy for first-generation college sophomores as compared to continuing-generation sophomores. However, they used a definition of first-generation college students that allowed for students who did have a role model (i.e., one parent in dual-parent homes) who earned a bachelor's degree to be considered first-generation college students. A more

conservative approach would include students who had even one parent finish college (in dual-parent homes) as continuing-generation college students. The less conservative definition by Vuong et al. may have increased the range of academic self-efficacy scores in the first-generation college student group, leading to non-significant differences between groups. However, the present study corrected for this by allowing any familial role model in an older generation to be considered in one's generational status. And still, the findings supported those of Vuong et al., suggesting academic self-efficacy may be unrelated to generational status.

While little research was found regarding generational status and career decision self-efficacy, one study was identified that examined these variables. Martinez et al. (2009) found higher levels of career decision self-efficacy for first-generation college students but lower actions toward career goals (e.g., dropping out of school) as compared with continuing-generation students. However, in that particular study, the authors may have actually been measuring career goals rather than career self-efficacy given that they asked about college-going aspirations to increase career opportunities rather than about the belief in one's abilities to complete career-related tasks. Therefore, the lack of differences between the two generational statuses in the present study with regard to academic self-efficacy and career self-efficacy suggests that students believe in their abilities to accomplish academic and career related tasks, regardless of the education levels of their parents or other family members in previous generations.

What is clear from the findings of the present study is that financial stress is a barrier to both academic self-efficacy and career decision self-efficacy. Although there is no cut-off score for the level of financial stress at which self-efficacy is compromised,

such a cut-off would be arbitrary and virtually useless. That is, it would ignore those just below the cut-off whose self-efficacy is also compromised and assume that those above the cut-off need intervention. Consistent with SCCT (Lent et al., 1994), most important are students' perceptions, regardless of category of financial stress in which there scores are measured. Therefore, it is important that these findings are not used to assume those who are found to be in the average or high financial stress categories are automatically at risk for failing out of school due to low self-efficacy. Specific measures, such as the InCharge Financial Distress/Financial Well-Being Scale (IFDFW; Prawitz et al., 2006) combined with measures of academic and career self-efficacy (such as the CSEI and CDMSE-SF, respectively), need to be used to identify those at risk and in need of intervention.

Strengths/Limitations

The population in the present study was restricted to students from a single 4-year university in the Midwestern region of the United States of America (USA), the majority of whom were from the state in which the university was housed. This limited the generalizability of the results to other regions of the USA and countries outside the USA, as well as to 2-year post-secondary institutions (Shadish et al., 2001a). Only 7.3% of participants identified as an ethnic minority student, which is less than the 13.6 % who attend Ball State University (College Data, 2009). The low percentage of ethnic minority students in this study reduces the representativeness of the sample (Heppner et al., 2008). Despite the low percentage of ethnic majority students, there was adequate heterogeneity in the sample with regard to gender, age (for a college population), year in school, GPA, major area of study, and disability status. Therefore, the findings can be generalized,

with at least some confidence, to all students at Ball State University and similar institutions (Shadish et al., 2001a).

Another limitation of the present study was the use of only self-report instruments for data collection of all variables (Shadish et al., 2001a). This mono-method bias may have led to different results than if multiple methods were employed (Shadish et al.). Similarly, there may have been a mono-operation bias since each variable was operationalized (i.e., defined) in only one way (Shadish et al.). Similar to mono-method bias, multiple operational definitions of each variable would increase the likelihood of accurately measuring the variables of interest (Shadish et al.). However, this was done for generational status (with the third post-hoc analysis) and the results were the same. In addition, because SCCT is the underlying theory for the proposed study, the accuracy of measuring one's true generational status, for example, is less important than measuring the participants' perceptions of this variable (Lent et al., 1994).

Similarly, the lack of a clear definition in past research for a first-generation college student was another potential limitation. This led me to use a combination of theory and definitions from past research when defining this variable. It remains unclear if this definition was too limiting or too inclusive to measure the true variable of generational status (Shadish et al.). However, the finding that fewer students self-identified as first-generation college students than those included with the traditional definition suggests that the definition in the present study may have been less inclusive (but possibly more accurate) than using a more objective definition. Again, this is less important with a SCCT framework because it is the participants' perceptions of these variables that are most important (Lent et al., 1994).

Another potential limitation was the possible violation of the assumption of equal variances for MANOVA (Shadish et al., 2001b). For the present study, Box's M was not significant but was close to the cut-off (.002, cut-off = .001; Tabachnick & Fidell, 2001). Therefore, I conducted a post-hoc analysis (i.e., MANCOVA) to eliminate this threat in case the assumption was actually violated.

In addition to attempting to address several of the limitations mentioned above, another strength of the present study included reaching more than double the minimum number of participants desired (i.e., 180) in order to achieve the desired power (Shadish et al., 2001b; VanVoorhis & Morgan, 2001). However, when looking at each group (i.e., cell), this was not done with the first-generation college students who had low financial distress (i.e., the sample size was less than 30 for this group). Fortunately, when this group was removed from the analysis, the results remained the same, indicating that power was adequate regardless of this limitation.

Another strength of the present study was the use of both valid and reliable instruments. Also, the study was based on SCCT and provided support for core tenets the theory. In addition, the study has important implications for college students, which will be discussed below. This study makes a significant contribution to existing knowledge because it provides information about how both generational status and financial stress may influence one's experience in college.

Implications for Theory

The findings from this study have several implications for Social Cognitive Career Theory (SCCT). First, this study adds to the literature supporting SCCT in two important ways. Financial stress was seen as a proximal contextual factor, which by

definition is more salient for individuals than distal contextual factors (Lent et al., 1994). Therefore, the fact that financial stress, but not generational status, was related to the two forms of self-efficacy provides further support for the idea that distal and proximal contextual supports and barriers have varying levels of influence on self-efficacy. Similarly, the results of the discriminant analysis indicated that academic self-efficacy was more strongly influenced by financial stress than career self-efficacy, although both were significant. Again, this makes sense given that students are in college (i.e., academics are most salient) rather than (solely) in the workforce.

Furthermore, the finding that there was no difference in either form of self-efficacy based on generational status, contradictory to past findings, suggests that there may be something else that serves as a mediator between the distal contextual factor (i.e., generational status) and self-efficacy. One possible reason for the difference in the findings of the present study as compared with past research is that much of the past research on first-generation college students has focused on 2-year colleges whereas this study focused on a 4-year university. Therefore, there may be something about the first-generation students in the present study that makes them more similar to the continuing-generation students at the same 4-year university. Perhaps only first-generation students who are doing better in school as compared to other first-generation peers get accepted into a 4-year university. According to SCCT, this would be a past learning experience (Lent et al., 1994), which in turn positively influences self-efficacy. Because that was not measured as a variable in the present study, it is unclear whether such a mediating variable exists or would have made a difference in the present study.

It is not feasible to include all components of the SCCT model into one study, but the present research examined an important portion of the theoretical model. Mediating influences were not directly studied, nor were variables such as outcome expectations or goals (Lent et al., 1994). However, the present study did explore several person inputs, contextual supports and barriers, and even actions. These included gender, age, year in school, GPA, major area of study, and disability status. For each of these variables, one-way ANOVAs were used to see if either accounted for differences in academic or career self-efficacy. No differences were found. This is consistent with SCCT as none of these variables are theorized to directly influence or be influenced by self-efficacy (Lent et al., 1994). However, to get a more accurate picture of how these variables interact, future research might include variables from each step or component of SCCT (i.e., person inputs, proximal and distal contextual supports/barriers, learning experiences, self-efficacy, outcome expectations, goals, actions) and these should be explored as they relate to one another.

Another important addition to SCCT was the measurement of two specific forms of self-efficacy rather than one broad form. Past research has focused mainly on academic self-efficacy (Gibbons & Borders, 2010; Grodsky & Riegle-Crumb, 2010; McCarron & Inkelas, 2006; Messersmith & Schulenberg, 2008) or self-efficacy in general (e.g., Bandura et al., 1996; Horn & Nuñez, 2000; Rivera et al., 2007). However, what is perhaps most important to college students and most consistent with SCCT are academic self-efficacy and career decision self-efficacy.

The measurement of financial stress and generational status as subjective variables was important for SCCT (Lent et al., 1994). Past research on these two

variables have ignored the individual's experiences and assumed that objective measurements accurately represent these constructs. This approach undermines the relationship between one's interpretation of external stimuli and one's own view of self. Doing so is inconsistent with SCCT and assumes a more simple stimulus-response relationship. The fact that fewer students self-identified as first-generation college students than those who were identified by a more objective definition was evidence that the objective approach is not consistent with individuals' experiences.

Implications for Counseling

The findings that students have the same levels of academic self-efficacy and career self-efficacy regardless of generational status have some interesting implications for counselors. These findings suggest there may be something different about first-generation college students today compared with those in previous studies, at least in a 4-year university. While it is unclear what that difference is, it seems they do not exhibit lower levels of academic and career self-efficacy when compared to continuing-generation college students. It may be that these differences do not exist at this university, in a 4-year university, or anywhere in the USA. However, because we do not know if the results extend beyond this specific population, counselors need to pay attention to students who lack a college graduate role model in order to determine whether this is affecting their current college experience.

While the present study suggests there may not be a difference in academic self-efficacy or career self-efficacy based on generational status, counselors need to be mindful of students' generational statuses in order to understand their unique experiences. Some studies have shown that participation in college preparation programs can make up

for not having a college graduate role model in the family (e.g., Martinez et al., 2009; Olive, 2008; Reid & Moore, 2008). For those students who did not have this opportunity, counselors can help guide students through their educational process by informing them of resources on campus (e.g., scholarship and financial aid offices, learning centers), help with career decisions through career counseling, and provide emotional support if family members are not supportive of students' educational endeavors (Phinney & Haas, 2003).

Based on the lack of significant differences in the present study between first-generation and continuing-generation college students with regard with academic self-efficacy and career self-efficacy, it appears first-generation college students are moving away from being an "at-risk" population when it comes to self-efficacy. This is supported by other recent researchers (e.g., Olive, 2008; Reid & Moore, 2008; Martinez et al., 2009) who found that organizational programs (e.g., college preparation programs) and support and encouragement from important others (e.g., teachers, guidance counselors, extended family members, older siblings) can make up for not having a college graduate role model in an older generation.

Again, that does not, mean the problem is solved or these individuals should be ignored. On the individual level, there may still be clinically meaningful (as opposed to statistically significant) differences for first-generation college students. Counselors need to be sure to listen to students' experiences and determine whether problems that bring clients to counseling might be related to a lack of guidance from a role model or lack of emotional support from family members. For example, Phinney and Haas (2003) utilized a qualitative approach to learn that first-generation college students sometimes do not feel supported by family members, either because they do not understand the difficulties of

college or because they prefer the individual enter the workforce immediately rather than go to school. This lack of support can make college that much more difficult on students, who may seek counseling to help cope with problems at school as well as conflicting emotions toward being in school despite family members' wishes (Phinney & Haas). In addition, the present study did not explore career tasks (e.g., deciding a major, graduating, applying for jobs), which Martinez et al. (2009) found to be lower in first-generation college students compared to continuing-generation college students, despite similar levels of self-efficacy. Therefore, counselors should also monitor clients' actions toward their career goals when assessing progress.

Based on the findings of the primary analysis, financial stress seems to play an even more important role than generational status in students' academic and career self-efficacy. Therefore, counselors need be aware of the potential negative consequences that fees for counseling may have on students. If counselors are not careful, that which is intended to help students will either increase their financial stress or limit access for those who possibly need it the most. Counselors also need to be aware of finances as a potential cause of problems. While financial difficulty/stress is something that is often assumed about college students (i.e., the common saying "broke college students"), the findings of the present study suggest it is related to lower academic and career self-efficacy, which have been linked to lowered performance and retention in college (e.g., Robbins et al., 2004). Therefore, counselors should assess for financial stress and help clients find ways to make ends meet so they can focus on their academic tasks and, ultimately, career development.

Directions for Further Research

Several questions remain unclear given the results of the present study. First, it is unclear if the findings could be replicated with students from a 2-year college. More past research has focused on students in 2-year colleges than on students at 4-year universities. Thus, it is possible that the differences found in the literature for first-generation college students may be a function of the type of degree sought (i.e., 2- or 4-year). Because the findings of this study contradict findings from past research at 2-year colleges (e.g., Grodsky & Riegle-Crumb, 2010; McCarron & Inkelas, 2006; Messersmith & Schulenberg, 2008), a study comparing first- and continuing-generation students at these two types of universities across the country is warranted.

Second, a study examining multiple factors from each of the components of SCCT (i.e., person inputs, past experiences, distal and proximal contextual supports and barriers, outcome expectations, academic and career self-efficacy, goals, and actions; Lent et al., 1994) could be useful in telling us more about the interaction between the components of this theory. SCCT has gained much support in the literature but a study of this kind has yet to be done, especially with generational status and financial distress as variables. Sandler (2000) attempted this by examining 23 variables, including several components of SCCT. However, Sandler did not use a valid measure of perceived financial difficulty and nor did he address all of the components of SCCT.

Another question that remains is whether career decidedness plays a role in one's self-efficacy (or vice-versa). Participants in the present study mostly reported they had decided on a major. However, it would be interesting to discover if those who remained undecided differed in their academic and career decision self-efficacy (or conversely, is

low self-efficacy the reason for indecision). Finally, there has been a lack of experimental designs in research studies addressing the components of SCCT. Such a design might be a pre- and post-test design that includes providing career counseling for the treatment group, mental health counseling for another treatment group, and a no-treatment control group. Regardless of the methodology, support for SCCT will remain limited without true experimental research.

Conclusion

The present study explored both distal (i.e., generational status) and proximal (i.e., financial stress) contextual factors for college students in order to better understand the influence of students' perceptions of these factors on academic and career decision self-efficacy. Based on the findings of the present study, it seems first-generation college students have similar levels of academic and career self-efficacy as continuing generation college students. This study also provides support for utilizing a more subjective approach to measuring generational status within a college population. In addition, financial stress appears to be related to both academic and career decision self-efficacy, regardless of one's generational status. More specifically, the higher one's financial stress, the lower one's academic and career self-efficacy were in the present study. Finally, financial stress more strongly influenced academic self-efficacy than career decision self-efficacy (although both were significant) in the present study. This makes sense given academic self-efficacy is more salient than career decision self-efficacy for college students. As these students are the future of a large percentage of the workforce, it is essential that researchers continue to explore ways to help college students succeed.

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Appendix A - Recruitment E-mail

Dear Student,

I would like to invite you to participate in a dissertation study of college students' financial stress and generational status. If you choose to participate, you will be asked to respond to questions regarding your perceptions of your current financial situation, generational status, your confidence in your ability to perform academic and career decision-making tasks, and demographic information (e.g., race/ethnicity, age, etc.). Participation in this study is expected to take about 15-20 minutes. Four participants will be randomly selected to receive a $20 gift card to Amazon.com. No identifying information will be linked to responses and instructions will be given for inclusion for gift card selection at the end of the survey.

The online survey can be found at:
http://inquisitor.bsu.edu/inqsit/inqsit.cgi/kperrone/Aarika?Efficacy2011

By completing this survey, you will help to further understanding of supports and barriers college students face. This will allow counselors especially to be better informed when working with college students.

Sincerely,

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Appendix B - Informed Consent

Thank you for your interest in this study. Please read the following information and then click on the link below to give your consent to participate in the study.

The purpose of the study is to help the researchers gain a better understanding of factors that play a role in college students' beliefs in their own academic and career decision-making abilities. You will be asked to complete a series of questionnaires about yourself, your perceptions of your current financial situation, and your confidence in academic and career decision-making tasks. Participation is expected to take 15-20 minutes. You must be at least age 18 to participate.

After participating you will be eligible to receive one of four $20 gift cards via random selection from the participant pool. If you choose to enter the raffle you will be asked to e-mail the researcher at an e-mail address provided after you complete the survey. Since no identifying information will be collected about you during the survey, only those who express interest in entering the giveaway via e-mail will be entered into the drawing. If you are enrolled in a BSU CPSY course you may receive partial course credit for participation in this study. Directions regarding gift cards and course credit are provided on the debriefing page of this study.

You will not be asked for your name or any other information that would make it possible to identify your answers as belonging to you (i.e., your participation in this study is anonymous). The foreseeable risks or ill effects from participating in this study are minimal. There is a small possibility that answering some of the questions on the questionnaires may evoke some strong emotions or anxiety. Should you experience any uncomfortable feelings, there are free counseling services available to you as a student through the Ball State University Counseling Center (765-285-1736), located in Lucina Hall, Room 320. For questions about your rights as a research participant, please contact Research Compliance, Sponsored Programs Office, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu.

Your participation in this study is completely voluntary and you are free to withdraw from the study at any time for any reason without penalty or prejudice from the investigator. Please feel free to contact the investigator with any questions you may have regarding this study.

To participate in the study, click "I agree" below. By clicking on "I agree," you are agreeing to participate in this research study and agreeing that the study has been explained to you and your questions have been answered to your satisfaction. If you have any additional questions at any time before, during, or after the study you can e-mail the researcher or her doctoral chair. You can print this introductory letter to keep for future reference.

Thank you for your time and participation!

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Appendix C

Demographic Questionnaire

Please fill out the following demographic information:

Gender.

- O Male
- O Female

Age in years.

____

Ethnicity.

- O Caucasian
- O African American
- O Asian American
- O Latino/Latina
- O Other, please specify _____

Home City.

_____

Home State.

_____

Home Country.

_____

Have you been diagnosed with any kind of disability?

- O No
- O Yes

If yes, please explain.

Current Cumulative GPA. If unsure, please give your best estimate.

_____

Current class standing.

- O Freshman
- O Sophomore
- O Junior
- O Senior

Current Enrollment Status.

- O Full-time
- O Part-time

Current Major.

- O A. Not Decided
- O B. Decided

If decided, please indicate your major(s) _____

Current Employment Status (select one; If multiple jobs add up to more than 40 hours, select Full-time).

- O Work-study
- O Part-time (other than work-study)
- O Full-time (35+ hours per week)

On average, how many hours do you work for pay each week?

_____

A **First-Generation College Student** is often defined as someone who does not have a parent/guardian or relative in an older generation who graduated from a 2-year or 4-year college. Please indicate whether or not you consider yourself to be a *First-Generation College Student* based on this definition or your own experience.

- O Yes
- O No

Please provide the highest level of education for the person who raised you. If more than one person raised you, just select the category for the highest level of either caregiver:

- O Some high school
- O High school diploma/GED
- O Some college
- O 2-year degree (e.g., Associate's; Technical degree)
- O 4-year degree (e.g., Bachelor's)
- O Some graduate school
- O Master's degree
- O Doctoral degree

What is the primary language spoken in your home?

_____

Appendix D – Debriefing Information

Shown on the last screen after each participant has submitted responses to the survey:

The study you just participated in was designed to assess generational status, financial stress, academic self-efficacy, and career decision self-efficacy. Past research has indicated that levels of academic and career decision self-efficacy may be related to supports or barriers during one's college experience. The goal of the study was to determine how academic and career decision self-efficacy differ based on financial stress and generational status.
If you would like to read more about this topic or this study please e-mail the primary investigator for a reference list. In addition, if you wish to receive a summary of the results once the study is complete, please let the investigator know.

AMAZON CARDS

Four gift cards to Amazon.com, valued at $20 each, will be given away by randomly selecting individuals from the participant pool. If you wish to be included in this random selection pool you will need to e-mail your name, e-mail address, and mailing address to abvannatter@bsu.edu. You are not required to participate in the give-away if you do not wish to do so.

COURSE CREDIT

If you are a student in a CPSY class at Ball State University you may receive one hour of research credit for having completed the survey instead of being entered for the gift card drawing. Because no identifying information was collected during the survey you must e-mail abvannatter@bsu.edu with your name and the instructor to whom you would like sent notification of participation. If you do not e-mail the researcher you will not receive credit for any CPSY class by completing this survey.

COUNSELING SERVICES

If you experience distress as a result of participating in this study please contact the Ball State University Counseling Center at 765-285-1736.

THANK YOU FOR YOUR PARTICIPATION!

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Appendix E

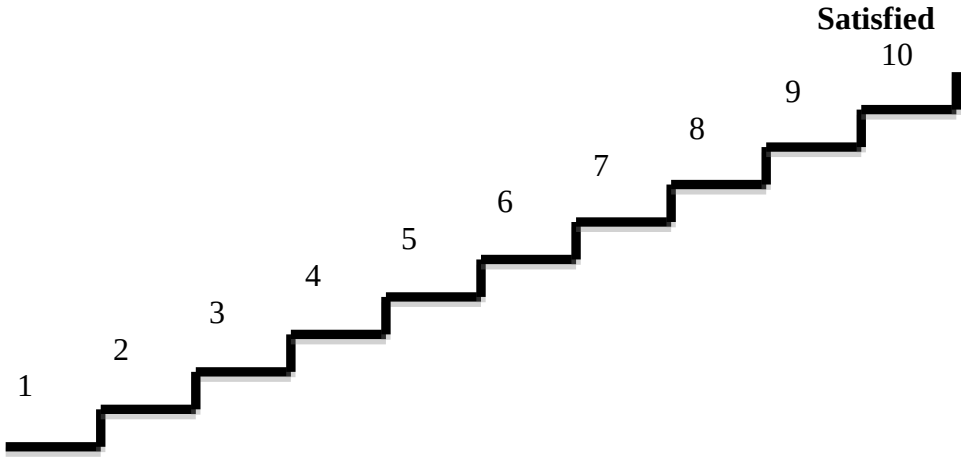
InCharge Financial Distress/Financial Well-Being Scale

Directions: Select the responses that are ***most appropriate*** for your situation.

1. What do you feel is the ***level*** of your ***financial stress today?***

1	2	3	4	5	6	7	8	9	10
	Overwhelming Stress		High Stress			Low Stress		No Stress at All	

2. On the stair steps below, mark how ***satisfied*** you are with your **present financial situation.** The "1" at the bottom of the steps represents complete dissatisfaction. The "10" at the top of the stair steps represents complete satisfaction. The more dissatisfied you are, the lower the number you should mark. The more satisfied you are, the higher the number you should mark.



Dissatisfied

3. How do you feel about your ***current financial situation?***

1	2	3	4	5	6	7	8	9	10
	Feel Overwhelmed		Sometimes Feel Worried			Not Worried		Feel Comfortable	

4. How often do you worry about being ***<u>able to meet</u>*** normal monthly living expenses?

1	2	3	4	5	6	7	8	9	10
Worry All the Time			Sometimes Worry			Rarely Worry			Never Worry

5. How confident are you that you could find the money to pay for a ***<u>financial emergency</u>*** that costs about **<u>$1,000</u>**?

1	2	3	4	5	6	7	8	9	10
No Confidence			Little Confidence			Some Confidence			High Confidence

6. How often does this happen to you? You want to go out to eat, go to a movie or do something else and ***<u>don't go because you can't afford to?</u>***

1	2	3	4	5	6	7	8	9	10
All the time			Sometimes			Rarely			Never

7. How frequently do you find yourself just getting by financially and living ***<u>paycheck to paycheck</u>***?

1	2	3	4	5	6	7	8	9	10
All the time			Sometimes			Rarely			Never

8. How ***<u>stressed</u>*** do you feel about your personal finances ***<u>in general</u>***?

1	2	3	4	5	6	7	8	9	10
Overwhelming Stress			High Stress			Low Stress			No Stress at All

Appendix F

College Self-Efficacy Instrument

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the key. Mark your answer by clicking the correct circle.

Not at all confident *Extremely confident*

0 1 2 3 4 5 6 7 8 9 10

How confident are you that you could successfully complete the following tasks:

1. Research a term paper.
2. Write course papers.
3. Do well on your exams.
4. Take good class notes.
5. Keep up to date with your schoolwork.
6. Manage time effectively.
7. Understand your textbooks.
8. Get along with your roommate(s).
9. Socialize with your roommate(s).
10. Divide space in your apartment/room.
11. Divide chores with your roommate(s).
12. Participate in class discussions.
13. Ask a question in class.
14. Get a date when you want one.
15. Talk to your professors.
16. Talk to university staff.
17. Ask a professor a question.
18. Make new friends at college.
19. Join a student organization.

Appendix G

Career Decision Self-Efficacy Scale-Short Form

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the key. Mark your answer by clicking the correct circle.

NO CONFIDENCE AT ALL	VERY LITTLE CONFIDENCE	MODERATE CONFIDENCE	MUCH CONFIDENCE	COMPLETE CONFIDENCE
1	2	3	4	5

Example: How much confidence do you have that you could:

a. Summarize the skills you have developed in the jobs you have held?
If your response was "Moderate Confidence," you would click the circle below number 3.

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:

1. Use the Internet to find information about occupations that interest you.
2. Select one major from a list of potential majors you are considering.
3. Make a plan of your goals for the next five years.
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.
5. Accurately assess your abilities.
6. Select one occupation from a list of potential occupations you are considering.
7. Determine the steps you need to take to successfully complete your chosen major.
8. Persistently work at your major or career goal even when you get frustrated.
9. Determine what your ideal job would be.
10. Find out the employment trends for an occupation over the next ten years.
11. Choose a career that will fit your preferred lifestyle.
12. Prepare a good resume.
13. Change majors if you did not like your first choice.
14. Decide what you value most in an occupation.
15. Find out about the average yearly earnings of people in an occupation.
16. Make a career decision and then not worry whether it was right or wrong.
17. Change occupations if you are not satisfied with the one you enter.
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.
19. Talk with a person already employed in a field you are interested in.
20. Choose a major or career that will fit your interests.
21. Identify employers, firms, and institutions relevant to your career possibilities.
22. Define the type of lifestyle you would like to live.
23. Find information about graduate or professional schools.
24. Successfully manage the job interview process.
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.