

AN EXAMINATION OF THE RELATIONSHIP OF PROGRAM FACTORS AND
PERSONAL FACTORS TO DISSERTATION SELF-EFFICACY IN COUNSELOR
EDUCATION DOCTORAL STUDENTS

by

Gregory A. Georgiou

A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Counselor Education and Supervision

Charlotte

2017

Approved by:

Dr. Susan Furr

Dr. Anita Blowers

Dr. Claudia Flowers

Dr. Henry Harris

Dr. Phyllis Post

ABSTRACT

GREGORY A. GEORGIU. An examination of the relationship of program factors and personal factors to dissertation self-efficacy in counselor education doctoral students. (UNDER THE DIRECTION OF DR. SUSAN FURR.)

This study examined the relationship of program factors (advising relationship and program climate) and personal factors (social support, procrastination, life stressors, finances, and student classification) to dissertation self-efficacy in counselor education doctoral students. Participants included 157 ($N=157$) counselor education doctoral students who were enrolled full-time or part-time in CACREP-accredited doctoral programs. Empirically-validated instruments were used to collect data through a web-based survey.

Results of the study showed that the factors of advising relationship, student classification, and procrastination accounted for 25.1% of the variance in dissertation self-efficacy. Program climate, life stressors, finances, and social support had no effect on dissertation self-efficacy. The study's results indicated that the following conditions led to the highest levels of dissertation self-efficacy: an advisor-advisee working alliance characterized by a strong connection between the two, a participant classified as a doctoral candidate in the program, and a lesser tendency to procrastinate.

TABLE OF CONTENTS

| | |
|------------------------------|----|
| LIST OF TABLES | ix |
| CHAPTER I: INTRODUCTION | 1 |
| Doctoral Student Development | 3 |
| Self-Efficacy | 5 |
| Dissertation Self-Efficacy | 5 |
| Personal and Program Factors | 7 |
| Purpose of the Study | 8 |
| Factors Selected for Study | 9 |
| Advisory Relationship | 10 |
| Program Climate | 10 |
| Social Support | 11 |
| Life Stressors | 12 |
| Finances | 12 |
| Procrastination | 13 |
| Student Classification | 13 |
| Significance of the Study | 13 |
| Research Question | 14 |
| Research Design | 15 |
| Operational Definitions | 16 |
| Advisor | 16 |

| | |
|-------------------------------|----|
| Advisory Relationship | 16 |
| Dissertation Self-Efficacy | 16 |
| Doctoral Program Progression | 16 |
| Life Stressors | 17 |
| Finances | 17 |
| Personal Factors | 17 |
| Procrastination | 17 |
| Program Climate | 17 |
| Program Factors | 18 |
| Social Support | 18 |
| Student Classification | 18 |
| Assumptions | 18 |
| Delimitations | 19 |
| Limitations | 19 |
| Threats to Validity | 20 |
| Threats to Internal Validity | 20 |
| Threats to External Validity | 20 |
| Summary | 21 |
| Organization of the Study | 21 |
| CHAPTER II: LITERATURE REVIEW | 23 |
| Introduction | 23 |
| Research on the Problem | 23 |

| | |
|---|-----------|
| Doctoral Student Development | 26 |
| Factors Influencing Dissertation Completion | 36 |
| Bandura and Self-Efficacy | 37 |
| Dissertation Self-Efficacy | 41 |
| Research Self-Efficacy | 47 |
| Personal and Program Factors | 52 |
| Factors Selected for Study | 70 |
| Advisory Relationship | 71 |
| Program Climate | 77 |
| Social Support | 84 |
| Life Stressors | 87 |
| Finances | 89 |
| Procrastination | 91 |
| Summary | 93 |
| CHAPTER III: METHODOLOGY | 95 |
| Introduction | 95 |
| Participants | 95 |
| Procedures | 96 |
| Instrumentation | 98 |
| Recruitment Email | 98 |
| Informed Consent Form | 98 |
| Counselor Education Doctoral Student Dissertation Inventory | 99 |

| | |
|--|-----|
| Survey | |
| Research Design | 113 |
| Research Question | 114 |
| Data Analysis | 115 |
| Summary | 116 |
| CHAPTER IV: RESULTS | 118 |
| Introduction | 118 |
| Description of Participants | 118 |
| Data Screening | 122 |
| Descriptive Statistics | 126 |
| Reliability Data | 126 |
| Results and Findings | 127 |
| Summary | 129 |
| CHAPTER V: DISCUSSION | 131 |
| Overview | 131 |
| Discussion of the Results of the Study | 132 |
| Discussion of the Prediction Model | 132 |
| Discussion of Dissertation Self-Efficacy | 136 |
| Discussion of the Advisory Relationship | 137 |
| Discussion of Student Classification | 138 |
| Discussion of Procrastination | 139 |
| Discussion of Program Climate | 140 |

| | |
|---|-----|
| Discussion of Social Support | 141 |
| Discussion of Life Stressors | 142 |
| Discussion of Finances | 143 |
| Contributions of the Study | 144 |
| Limitations of the Study | 146 |
| Implications of the Findings | 149 |
| Recommendations for Future Research | 151 |
| Conclusions | 153 |
| REFERENCES | 154 |
| APPENDIX A: CACREP PROGRAM RECRUITMENT EMAIL | 170 |
| APPENDIX B: LISTSERV PARTICIPANT REQUEST | 172 |
| APPENDIX C: INFORMED CONSENT FORM | 173 |
| APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT DISSERTATION INVENTORY SURVEY | 174 |
| APPENDIX E: DISSERTATION SELF-EFFICACY SCALE | 180 |
| APPENDIX F: ADVISORY WORKING ALLIANCE INVENTORY | 182 |
| APPENDIX G: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT | 183 |
| APPENDIX H: PROCRASTINATION SCALE | 184 |
| APPENDIX I: REGRESSION STANDARDIZED RESIDUAL | 185 |
| APPENDIX J: RESIDUAL STATISTICS | 187 |
| APPENDIX K: CORRELATION MATRIX | 188 |

LIST OF TABLES

| | |
|--|-----|
| Table 1: Frequencies for Descriptive Variables Used in the Study | 121 |
| Table 2: Variables, Type, Definition, and Measurement | 125 |
| Table 3: Descriptive Statistics | 126 |
| Table 4: Reliability Statistics | 127 |
| Table 5: Multiple Regression Results | 129 |

CHAPTER I: INTRODUCTION

The doctoral degree is considered the highest level of education (D'Andrea, 2002) and the apex of the educational process (Del Rio & Mieling, 2012), which provides many benefits to society. Bair and Haworth (1999) noted the “tremendous importance of doctoral study to research, education, leadership, policy, and professional practice” (p. 1). Because doctoral students are considered to be the most academically capable, most academically successful, most stringently evaluated, and most carefully selected students in the educational system, completing all of the requirements for their doctoral degrees is within their capabilities, and most “attrition is unnecessary and preventable” (Golde, 2005, p. 696). When individuals are admitted to doctoral programs and subsequently fail to graduate, losses are incurred. Universities and their faculty members invest a considerable amount of time and financial resources in their doctoral students and do not receive a return when these doctoral students do not complete their degrees (Baird, 1990, 1993; Burkard et al., 2014; Hardy, 2015; Kelley & Salisbury-Glennon, 2016; Lovitts, 2001; Malone, Nelson, & Nelson, 2004). Doctoral education provides candidates for top positions within business, science, and industry and when doctoral students do not complete their degrees, this vital resource pool is reduced (Bair & Haworth, 1999; Lovitts, 2001; Tinto, 1993). Failure to complete their doctoral degrees can negatively affect students' emotional well-being by experiencing symptoms of depression, anxiety, and low self-worth (Ampaw, 2010; Breckner, 2012; Burkholder, 2012; Lovitts, 2001;

Willis & Carmichael, 2011). Because of the critical importance that doctoral education holds, it is vital that students who enroll in their programs complete their degrees.

Many doctoral students fail to complete their degrees, and the historical rate of doctoral program completion ranges from 20% - 70% depending upon the academic discipline (Ampaw & Jaeger, 2012; Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Council of Graduate Schools, 2009; Gardner, 2009, 2010; Lovitts, 2001; Nettles & Millett, 2006; Smallwood, 2004). The Council of Graduate Schools (2009) conducted the Ph.D. Completion Project, which was a large-scale study of the doctoral program completion rate at both public and private graduate schools in the United States. Results of the project found that the completion rate after ten years from beginning their doctoral program was 56.6% (Sowell, Zhang, Redd, & King, 2008). Completion rates varied by discipline, with humanities being the lowest with a 49.3% completion rate to engineering having the highest rate of 63.6%. The completion rate in social sciences was 55.9%. Because of concern about completion rates, scholars continue to conduct research and to provide ideas in an attempt to increase doctoral completion rates (Council of Graduate Schools, 2010).

Doctoral students drop out of their programs at different points in their curriculum and for different reasons (Bair & Haworth, 1999; Golde, 2005; Lovitts, 2001; Tinto, 1993). Given that each discipline faces different challenges, specific examination of counselor education is warranted. Within counselor education doctoral programs,

scholars have begun an initial examination of doctoral student retention (Breckner, 2012; Burkholder, 2012; Hoskins & Goldberg, 2005; Hughes & Kleist, 2005).

Successfully defending a dissertation is required for graduation and becomes the gateway to many careers, including one in counselor education which requires the ability to plan, conduct, and report original research (Borders, Wester, Fickling, & Adamson, 2015; Council for Accreditation of Counseling and Related Education Programs [CACREP], 2015; Del Rio & Mieling, 2012). Scholars have attempted to provide support to doctoral students by producing resources and strategies for them to use in the dissertation stage of their program in order to successfully complete their degrees (D'Andrea, 2002; Del Rio & Mieling, 2012; Lambie, Sias, Davis, Lawson, & Akos, 2008). Despite their best efforts, the most recent completion rate within CACREP programs is 76.7% (T. Kimbel, personal correspondence, April 20, 2016). Additional research is required in order to increase the completion rate in all counselor education doctoral programs by examining the dissertation process and the factors that affect the dissertation experience and completion.

Doctoral Student Development

In an effort to address the problem of non-completion, several scholars have proposed models of doctoral student development (Baird, 1993; Gardner, 2009, 2010; Tinto, 1993). These models are an attempt to conceptualize doctoral student behavior with the goal of decreasing attrition and providing effective interventions. Tinto proposed a three-stage model of doctoral student persistence that identified the needs of students as they persist in their program, including the final stage during which the dissertation

begins. Tinto theorized that the key factors of personal supports and program supports, including academic integration with the program, are vital to persisting through dissertation completion. Baird (1993) proposed the Integrated Model of doctoral student development in an attempt to identify the most salient factors that affect time-to-degree completion. The Integrated Model conceptualized that the factors of faculty and family support would increase doctoral student persistence while poor academic and social relationships would increase attrition.

Gardner (2009, 2010) proposed an empirically-based three-phase model of graduate student development, which attempted to provide an understanding of the doctoral student experience, including dissertation. The final phase of the model is where students conduct research and complete their degrees, and Gardner's (2010) subsequent research study identified the theme of support from faculty, peers, and family and the theme of transitioning between roles during the program as necessary for program completion. All three doctoral student development models (Baird, 1993; Gardner, 2009, 2010; Tinto, 1993) have identified and proposed factors that affect the doctoral student experience in general and dissertation completion specifically. In addition, all of these models identified changes in doctoral students as they persist in their programs, which the current study will attempt to measure. The extant counselor education dissertation literature has not examined how specific qualities or factors in doctoral students may change throughout the course of the program. The current study used Gardner's model as a framework to interpret the results.

Self-Efficacy

Self-efficacy (Bandura, 1977) is an empirically-validated construct that originated from examining psychological changes in response to different treatment modalities. Bandura hypothesized that efficacy can determine the level of effort that individuals will apply when they encounter obstacles and difficult experiences. Individuals with higher levels of self-efficacy, or belief, will apply higher levels of effort and persistence to difficult tasks (Pajares, 1996). Since Bandura originally conceptualized self-efficacy, it has been applied and empirically-validated in many areas outside of psychology, including predicting academic achievement (Bandura, 1997; Britner & Pajares, 2006; Harsch, 2008; Pajares, 1996; Schunk & Pajares, 2002). Academic self-efficacy measures the conviction that people can complete a specific academic task (Britner & Pajares, 2006), and the doctoral dissertation is an academic task that must be completed in order to complete the Ph.D. degree (Harsch, 2008). Self-efficacy is the theoretical construct that was measured in the current study using participants at each stage of doctoral student development.

Dissertation Self-Efficacy

Self-efficacy beliefs can lead to motivation and accomplishment (Pajares, 1996). Because the dissertation process is a rigorous and demanding academic task that requires a significant amount of time, commitment, belief, and effort, self-efficacy theory has been applied to it as an attempt to increase dissertation completion (Kelley & Salisbury-Glennon, 2016; Varney, 2010). Several researchers have begun to examine dissertation self-efficacy, which is an individual's confidence to write the dissertation, in multiple

academic disciplines (Varney, 2003). In the academic discipline of education, Varney (2003, 2010) sought to determine whether self-efficacy was a viable construct in relation to dissertation progress and then to determine its relationship to doctoral program components and dissertation progress. In order to examine this concept, Varney (2003, 2010) developed and tested the Dissertation Self-Efficacy Scale (DSES), which was found to measure doctoral students' beliefs in their ability to complete their dissertations. Varney's hypothesis was that students with higher dissertation self-efficacy scores would demonstrate greater dissertation progress, which the study's results corroborated. The doctoral students who had higher levels of dissertation self-efficacy demonstrated greater dissertation progress than those who had lower levels of dissertation self-efficacy and demonstrated less dissertation progress. The critical result of this study was it established the empirical link between dissertation self-efficacy and dissertation progress. The current study attempted to measure factors that may be related to dissertation self-efficacy, which has an empirical relationship with dissertation progress.

Only one research study has examined dissertation self-efficacy in counselor education. Harsch (2008) measured dissertation completers and dissertation non-completers on dissertation self-efficacy and found that dissertation completers scored significantly higher in dissertation self-efficacy than the non-completers. While this result may appear intuitive, Harsch also identified program and personal factors that influenced the time-to-degree completion. Outside of counselor education, Colvin (2012) examined the relationship between dissertation self-efficacy and dissertation progress across 92 different academic disciplines. Results of Colvin's study found that dissertation self-

efficacy had a significant and positive effect on dissertation progress and dissertation self-efficacy explained a portion of dissertation progress. One conclusion that can be drawn from these studies is that self-efficacy is a salient measure in dissertation progress and completion, and it was therefore used in the current study as the outcome measure. These research studies, however, have not measured changes in dissertation self-efficacy during the different stages of doctoral student development, and the factors that may be related to dissertation self-efficacy have not been examined.

Personal and Program Factors

Researchers from diverse academic disciplines have attempted to identify the factors that may influence dissertation progress in an attempt to increase doctoral program completion rates (Bair & Haworth, 1999; Golde, 2005; Lovitts, 2001). As a result of their research studies, these factors can be categorized as program and personal factors. Program factors are those elements that the university or doctoral program can control, and personal factors are those elements that are external to the university and program. Within the empirical counselor education research literature, researchers have identified both program and personal factors that have been shown to affect the dissertation experience. For example, mentoring (Del Rio & Mieling, 2012; Flynn, Chasek, Harper, Murphy, & Jorgensen, 2012.; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009), advising (Bridgmon, 2007; Burkholder, 2012; Willis & Carmichael, 2011), program expectations and match (Carlson, Portman, & Bartlett, 2006; Hoskins & Goldberg, 2005), and department and academic culture (Burkholder, 2012; Protivnak & Foss, 2009) have all been shown to influence the

doctoral experience, including dissertation outcomes. Personal factors, such as finances (Breckner, 2012; Carlson et al. 2006; Flynn et al., 2012; Harsch, 2008), health (Burkholder, 2012; Protivnak & Foss, 2009), work (Flynn et al., 2012; Willis & Carmichael, 2011), and emotional support (Flynn et al., 2012; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009) have been found to influence the doctoral program experience and the dissertation experience. Almost all of these research studies used qualitative methods and identified themes or emergent theories. The academic discipline of psychology has also begun to examine the dissertation experience of its doctoral students. Qualitative research studies found that the most salient factors affecting the dissertation experience were advising, students' personal characteristics, and faculty and family support, which are similar to the counselor education findings (Burkard et al., 2014; Knox et al., 2011; Schlosser, Knox, Moskovitz, & Hill, 2003). None of the studies examined program or personal factors among doctoral students at different points in their program. Further, none of these studies quantitatively examined the relationship of any factor to dissertation self-efficacy, which the current study sought to do in an attempt to augment the empirical literature in counselor education dissertation completion rates.

Purpose of the Study

Research in counselor education and other academic disciplines has shown that dissertation self-efficacy has significantly and positively predicted dissertation progress. Researchers have also found that while the factors of the advisory relationship, program climate, social support, life stressors, finances, procrastination, and student classification have been shown to influence the dissertation experience and outcomes for counselor

education students, these factors have not been examined directly for any relationship that they may have with dissertation self-efficacy. These factors have been shown to qualitatively influence the doctoral program experience and dissertation outcomes. The purpose of this study, therefore, was to understand the relationship of the advising relationship, program climate, social support, life stressors, finances, procrastination, and student classification to the dissertation self-efficacy in counselor education students. This study provided data on specific factors that may predict dissertation self-efficacy, which has been shown to affect dissertation progress.

Factors Selected for Study

Among the program and personal factors that have been identified in the extant counselor education literature, seven have been selected for examination in the current study because of the impact they have been shown to have in qualitative studies. The program factors of (a) advisory relationship and (b) program climate and the personal factors of (c) family and friends support, (d) life stressors, (e) finances, (f) procrastination, and (g) student classification were examined to determine their relationship to dissertation self-efficacy. Demographic variables were also included in the current study to provide a description of study participants. The program and personal factors that were examined in the current study are possible influences that can occur any time from the beginning of the program until they leave the program, which underscores the importance of the students' year in their program. The factors selected for the current study have never been examined together to determine their relative contribution to dissertation self-efficacy.

Advisory relationship. The advisory relationship can be described as the formal and informal processes that occur between a faculty member and student that facilitate the doctoral student's development from a student to a professional colleague (Gelso, 1993; Schlosser, Lyons, Talleyrand, Kim, & Johnson, 2011). Mentoring and the emotional support that a faculty member may provide can also be included in the advisory relationship. Advisors also hold a vital position as dissertation chairs, program chairs, and dissertation committee members. Within counselor education, research studies have identified the advisory relationship as a salient program factor in the dissertation experience (Burkholder, 2012; Ferrell, 2007; Flynn et al., 2012; Harsch, 2008; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009). These research studies have established the empirical link between the advisor and advisee but have not been examined quantitatively for any relationship with dissertation self-efficacy or measured with students at different time periods throughout the doctoral program.

Program climate. Program climate is a program factor that has been identified as important in the counselor education doctoral program literature (Breckner, 2012; Burkholder, 2012; Cusworth, 2001; Henfield, Woo, & Washington, 2013; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009). In these studies, counselor education doctoral students have reported that academics, department culture, program-student mismatch, and lack of cultural understanding have all influenced their decision to persist or depart from their program. Participants have also reported that they have been adversely affected by a negative program climate. One of the most widely-experienced negative aspects of program climate occurred when a mismatch existed between what the student

expected from the program and the program's focus (Breckner, 2012; Burkholder, 2012; Hoskins & Goldberg, 2005). For example, a program-student mismatch occurs when a student enrolls in a doctoral program in order to become a practitioner and the program's focus is research and counselor education. Another dimension of program climate that has been shown to negatively affect doctoral students and their experience is the program's lack of cultural understanding (Henfield et al., 2013). Program climate has been found to be an important factor in the counselor education dissertation literature because a negative program climate can increase program attrition.

Social support. Emotional support from family and friends is a personal factor that has been identified as important in the dissertation experience of counselor education students (Flynn et al., 2012; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009). Counselor education doctoral students have reported that social support has provided motivation to persist (Carlson et al., 2006; Hoskins & Goldberg, 2005), has been found to increase research skills and productivity (Dollarhide, Gibson, & Moss, 2013), and has provided help during the difficult times of doctoral study (Carlson et al., 2006). In two counselor education quantitative studies, friend and family support was a significant covariate predictor in dissertation time to completion (Kelley, 2011). Harsch (2008) also found this factor to be a statistically significant factor that accounted for the variance in time-to-degree completion. Family and friend support has also been found to negatively influence the dissertation process because some doctoral students felt guilty about not being able to spend time with friends and family members due to doctoral program demands (Protivnak & Foss, 2009). Additional research is necessary in order to

determine any relationship between social support and dissertation self-efficacy, which the current study examined. It remains unknown whether the social support that doctoral students receive changes as they persist in the program.

Life stressors. Life stressors are a personal factor that has been shown to affect the dissertation experience of counselor education doctoral students (Breckner, 2012; Protivnak & Foss, 2009). Negative health events, such as postponing critical health care, sickness, depression, long-term mental health counseling, weight gain, and hospitalization all have been shown to affect the doctoral and dissertation experiences of students (Breckner, 2012; Protivnak & Foss, 2009). In addition, interpersonal relationship break-ups, births, and deaths have also been identified as life events that have an impact on doctoral students in counselor education programs (Breckner, 2012; Burkholder, 2012; Protivnak & Foss, 2009). Any relationship that life stressors may have to dissertation self-efficacy has not been examined in the extant literature.

Finances. Finances are a personal factors that has been shown to affect the dissertation experiences of counselor education students (Breckner, 2012; Protivnak & Foss, 2009). Students' finances also affected the dissertation experience because financial pressures have led to program withdrawal (Breckner, 2012; Flynn et al., 2012). Additional counselor education studies have found that non-dissertation-related work was a barrier to dissertation completion because it offered the needed finances but pulled students away from their dissertation work (Flynn et al., 2012; Willis & Carmichael, 2011). The effect of students' finances on dissertation self-efficacy has not been measured.

Procrastination. Procrastination is the tendency to put off doing a task under one's control unnecessarily until a future date (Green, 1997; Tuckman & Sexton, 1989), and this factor has been relatively unexamined in its relationship to the dissertation experience and completion (Harsch, 2008). In counselor education, procrastination was found to be a factor that could prevent doctoral students from completing their dissertations (Harsch, 2008). Procrastination was also found to predict a delay in dissertation completion in clinical psychology graduates and doctoral candidates (Green, 1997). Procrastination has not been examined in relation to dissertation self-efficacy. The current study measured procrastination using quantitative methods.

Student classification. Student classification identifies the participant as either a doctoral student or doctoral candidate. In traditional counselor education doctoral programs, students are considered doctoral students until they pass their comprehensive exams, after which time they are considered doctoral candidates. This personal factor has not been reported in previous research studies where data on dissertation completers and those still working on their dissertations have been reported (Colvin, 2012; Harsch, 2008) which has limited the analysis. These prior research studies have compared dissertation completers to dissertation non-completers, although no studies have compared doctoral students to doctoral candidates.

Significance of the Study

A synthesis of the extant research in the dissertation experience and completion rates in counselor education doctoral program highlights the increasing need for a more comprehensive understanding of the factors that affect dissertation outcomes. Graduation

rates are one measure of a program's efficiency, and the need to increase doctoral program graduation rates has been a national priority (Council of Graduate Schools, 2009). Scholars and educators have proposed student development models, program initiatives, and policies in an attempt to increase completion rates. To date, this effort has proven to be elusive as evidenced by the national initiatives to increase the completion rate (Council of Graduate Schools, 2009, 2010). Specific identification of the set of factors that predict dissertation self-efficacy and subsequent dissertation completion is one gap in the literature that the current study sought to address. Identifying and measuring these factors will provide doctoral programs with information that they can then use to assist doctoral students with the factors that have been shown to affect them. Knowledge of doctoral students' dissertation self-efficacy at different time periods during their doctoral program is another gap in the current literature that also was addressed. The current study added quantitative results to a largely qualitative-results research base in the counselor education literature, which can provide more detailed data in order to implement program changes and dissertation initiatives. Because doctoral students' classification also was examined, having these results will allow programs to design interventions and policies at different stages of the program in preparation for the final stage, the dissertation, which then leads to program completion.

Research Question

The research question for this study is as follows:

1. Is there a statistically significant relationship between counselor education

doctoral students' advisory relationship, program climate, social support, life stressors, finances, procrastination, and student classification and dissertation self-efficacy?

Research Design

This study used a non-experimental, descriptive correlational design to address the research question. This research design was appropriate because descriptive research provides data for initial investigations into a phenomenon by answering questions about the participants and reporting the results, and dissertation self-efficacy and the factors that may affect it are still in the initial phase. Correlational research attempts to determine whether, and to what degree and direction, a relationship exists between two or more variables (Fraenkel, Wallen, & Hyun, 2011). A correlational research design is recommended for the current study because one purpose of the study is to determine whether a relationship exists between the program factors, personal factors, and dissertation self-efficacy in counselor education doctoral students. Participants completed the Counselor Education Doctoral Program Dissertation Inventory Survey, a self-report survey that provided data for the study's analysis.

The survey contained empirically-constructed and validated instruments and a demographics questionnaire that provided data on the program factors, personal factors, and demographic variables that may affect dissertation self-efficacy. Dissertation self-efficacy was the study's dependent variable and the independent variables were: (a) advising relationship, (b) program climate, (c) social support, (d) life stressors, (e) finances, (f) procrastination, and (g) student classification. A multiple linear regression,

which is an inferential statistical analysis, was run in order to answer the research question. Descriptive statistics were also run and reported in the study's results.

Operational Definitions

The following operational definitions were used in the study:

Advisor. Advisor is the counselor education doctoral program faculty member who has the greatest responsibility for helping to guide the doctoral student through the doctoral program. This individual may be a major professor, committee chair, dissertation chair, or mentor.

Advisory relationship. The advisory relationship is the advisor-advisee working alliance, which is the portion of the relationship between the doctoral student (advisee) and the advisor that reflects the connection between the two of them that is made while working toward common goals. Rapport, identification, and task focus are components of this alliance. The total scale score on the Advisory Working Alliance Inventory (Schlosser & Gelso, 2001) was used to measure the advisory relationship in the current study.

Dissertation self-efficacy. Dissertation self-efficacy refers to the counselor education doctoral student's ability to successfully write the doctoral dissertation (Varney, 2003). It encompasses all tasks that are required to successfully complete the dissertation. The total scale score on the Dissertation Self-Efficacy Scale (Varney, 2003) was used to measure dissertation self-efficacy in the current study.

Doctoral program progression. Doctoral program progression contains the seminal points in the doctoral program that counselor education students must complete

in order to fulfill their degree requirements. Specifically, these events are passing the comprehensive examination, beginning to write the dissertation, defending the dissertation proposal, and successfully defending the dissertation. These events were one survey item to which study participants responded.

Life stressors. Life stressors are the counselor education doctoral student's personal experiences of illness, family illness, death of a family member, friend, or significant person, interpersonal breakup, and birth of a child during the doctoral program.

Finances. Finances are the type of financial assistance that counselor education doctoral students receive during their program. Financial assistance can be from institutional and non-institutional sources.

Personal factors. Personal factors are elements that are external to the program and university that the individual doctoral student can control or influence.

Procrastination. Procrastination is the tendency to put off doing a task under one's control unnecessarily until a future date (Green, 1997; Tuckman & Sexton, 1989). It includes the tendency to waste time, delay, and intentionally put off something that should be done (Tuckman, 1991). The total scale score on the Procrastination Scale (Tuckman, 1991) was used to measure procrastination in the current study.

Program climate. Program climate is the interaction between the student and elements of the doctoral program. Program climate includes academics, department culture, program-student match, and cultural understanding. It was measured by five

items derived from the counselor education empirical literature on program climate in doctoral programs.

Program factors. Program factors are elements of the doctoral program that the department or university can control or influence in an attempt to improve the doctoral experience and increase dissertation completion rates.

Social support. Social support is the perception of social support adequacy from family, friends, and significant other that the counselor education doctoral student reports. The total scale score on the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure social support in the current study.

Student classification. Student classification is the distinction between a participant being a doctoral student or a doctoral candidate. Traditionally, doctoral students who have successfully completed their comprehensive examination have been classified as doctoral candidates. In the current study, participants who had not completed their comprehensive examination were classified as doctoral students, and students who had completed their comprehensive examination were classified as doctoral candidates.

Assumptions

The following assumptions have been made:

1. Participants in the study responded honestly and willingly.
2. Participants accurately comprehended the questions they read and their responses were made accurately.
3. The instruments used to collect the data were appropriate for this population.

Delimitations

The following delimitations have been identified for the current study:

1. Participants were current doctoral students who are enrolled in CACREP-accredited counselor education programs.
2. Study participants were limited to those who were able to read and respond in English.
3. Participant responses were self-report.

Limitations

The following limitations have been identified for the current study:

1. Social desirability may limit the results of this study because participants may answer in a way that they believe the researcher will want to hear (Edwards, 1957).
2. Results from the study may not be generalizable to non-counselor education programs based upon the sample of CACREP doctoral students.
3. Participants volunteered to participate, which increased the possibility that sample bias based upon traits that made them more likely to participate in a survey on dissertation self-efficacy than others. Some participants may have chosen to respond based upon their interest in research and self-selected to participate in the study.
4. The current study did not measure dissertation completion.
5. The research design was non-experimental, which means that the sample was not random and causality may not be inferred.

Threats to Validity

Validity in research studies is important because it provides a level of confidence to those who are using the results of the study. All research studies that use a sample contain threats to validity that must be addressed, and the current study used a sample of counselor education students from CACREP-accredited programs. The two threats to validity are internal and external.

Threats to Internal Validity

Internal validity. Internal validity is the degree to which the results from the analysis are attributable to the independent variables and not from an unexplained source. Extraneous or confounding variables are threats to internal validity because they may be affecting the study's results but they are unknown, which will lead to incorrect conclusions. Campbell and Stanley (1963) identified eight threats to internal validity, and the threat of instrumentation was relevant to the current study. Instrumentation threat arose from the survey that was given to participants, although the items were pilot-tested and peer-reviewed.

External validity. External validity is the extent to which the results of a study can be generalized across populations. Measurement error and nonresponse error (Dillman & Bowker, 1990; Groves, 1989) are two potential sources of error in surveys. Measurement error occurs when participants provide inaccurate answers to survey items because the survey is worded poorly or it results from the participants' answering behavior. Nonresponse error occurs from the nonresponse of those who, if they had responded, would have provided different answers from those participants who did respond to the

survey. Dillman, Tortora, and Bowker (1999) concluded that participants become frustrated and then prematurely stop taking the survey when they encounter a poorly-designed survey or lack basic computer skills. The current survey employed Dillman, Tortora, and Bowker's best practice methods for survey design.

Summary

While dissertation self-efficacy has been shown to reduce time-to-degree completion and increase dissertation progress, no empirical counselor education studies have been conducted in order to examine the personal and program factors that may affect dissertation self-efficacy. Researchers and scholars have conducted qualitative studies that have identified program and personal factors that influence the dissertation experiences and outcomes of counselor education doctoral students. To address this gap in the literature, the current study was an attempt to quantitatively examine the relationship of advisory relationship, program climate, social support, life stressors, finances, procrastination, and student classification to dissertation self-efficacy. The results of the study can be used by counseling departments to increase their doctoral students' dissertation self-efficacy.

Organization of the Study

This dissertation is divided into five sections or chapters. Chapter I contains the introduction, purpose of the study, significance of the study, research question, research design, assumptions, delimitations, limitations, threats to validity, and operational definitions. Chapter II reviews the literature in the following areas: doctoral student development, self-efficacy, dissertation self-efficacy, and program and personal factors

related to dissertation completion and the dissertation experience. Chapter III describes the research methodology for this study, including a description of participants, instrumentation, data collection procedures, and data analysis. Chapter IV contains the results and findings of the major analysis used to address the research question, and includes demographic data and descriptive statistics. Chapter V contains the discussion of the results, including the contributions and limitations of the study, implications of the findings, recommendations for future research, and conclusions.

CHAPTER II: LITERATURE REVIEW

Introduction

In this literature review, factors related to the dissertation process among counselor education students will be examined. The literature presented provides the foundation for the factors selected for use in this study. The focus of this chapter is to review both the conceptual and empirical literature that supports the factors selected for this study.

This chapter is divided into three sections. The first section contains a literature review of the theoretical base for doctoral student development from their first year through the third year or completion. The next section will examine both general and dissertation self-efficacy and examine variables that may contribute to dissertation self-efficacy. The final section contains a review and analysis of the personal and program components that have been found to be related to dissertation self-efficacy in counselor education and related academic disciplines. While the ultimate purpose of this study is to examine dissertation self-efficacy in counselor education students, the literature review will draw upon general self-efficacy and dissertation self-efficacy in other disciplines.

Research on the Problem

Estimates of doctoral students in the United States who do not complete their dissertations and fail to receive their Ph.D. range from 20% - 70% depending on the discipline (Ampaw & Jaeger, 2012; Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Council of Graduate Schools, 2009; Gardner, 2009, 2010; Lovitts, 2001; Nettles & Millett, 2006; Smallwood, 2004). Universities and their faculties invest considerable time

and resources in their doctoral students and do not receive a return on their doctoral student investment when candidates do not complete their degrees (Baird, 1993, 2001; Burkard et al., 2014; Hardy, 2015; Kelley & Salisbury-Glennon, 2016; Malone, Nelson, & Nelson, 2004). One goal of the doctoral program is to have students complete their degrees (Council of Graduate Schools, 2010). CACREP states that doctoral programs “extend the knowledge base of the counseling profession in a climate of scholarly inquiry” (CACREP, 2016, p. 34) and “equip students to assume positions of leadership in the profession” (p. 34). Dissertations are the seminal task that can allow counselor educators to produce significant and empirical contributions to counseling practice, counselor education, and supervision (Borders et al., 2015). It is a requirement for CACREP-accredited programs that their core counselor education program faculty members have earned doctoral degrees, with the doctoral program CACREP completion rate for 2015 being 76.7% (T. Kimbel, personal correspondence, April 20, 2016). The completion rate for non-CACREP counseling programs is unavailable.

Dissertation completion is a measure that graduate schools and doctoral programs have focused on as an indication of program effectiveness (Council of Graduate Schools, 2009). Successfully defending a dissertation is generally the final requirement to completing the doctoral degree, and because of that, dissertation completion and doctoral program status are tightly linked. Dissertations are known as the “culminating experience” of doctoral students’ professional education (Borders et al., 2015, p. 3). The costs associated with the difference between those who complete their dissertations and those who do not can be measured along multiple dimensions. For example, faculty time

and effort spent with doctoral students, including the significant financial cost (Ampaw & Yeager, 2012; Baird, 1993; Burkholder, 2012; D'Andrea, 2002; Hardy, 2015; Hoskins & Goldberg, 2005; Kelley & Salisbury-Glennon, 2016; Lovitts, 2001; Yeager, 2008), the loss of highly trained individuals to other fields (Hardy, 2015; Tinto, 1993; Varney, 2003), and the emotional costs on students who leave their doctoral programs (Ampaw, 2010; Breckner, 2012; Burkholder, 2012; Lovitts, 2001; Willis & Carmichael, 2011) are all much higher for those who do not complete their dissertations and doctoral degrees than for those who complete their dissertations and doctoral degrees.

Dissertation non-completers have been researched in the literature from different academic disciplines and from various dimensions. Students, faculty, and their institutions all share in the expense and loss of non-completers. For example, researchers have found that doctoral students who left their programs have felt depressed, devastated, hopeless, frustrated, demoralized, and tormented (Baird, 1990; Burkholder, 2012; Long, 1987; Lovitts, 2001; McAloon, 2004; Willis & Carmichael, 2011). Faculty members invest considerable time and effort in their doctoral students and that time is not maximized when their students do not complete their dissertations, which can result in reduced faculty productivity (Burkholder, 2012; Council of Graduate Schools, 2009; D'Andrea, 2002; Gardner, 2009; Golde, 2005; Kelley & Salisbury-Glennon, 2016; Lovitts, 2001). Golde concluded that all of these costs increase the longer a student has remained in the program and are felt more deeply because doctoral candidates have used more resources than beginning students. The synthesis of these scholars' work is that the

difference between a completed dissertation and one that will never be completed has far-reaching personal, institutional, and financial effects.

Researchers and scholars who have sought to identify and understand the reasons why doctoral students do not complete their dissertations have created empirical data that are relevant to this study. Harsch's (2008) comprehensive literature review in this area found the limited extant research findings focused in three areas: behavioral aspects surrounding dissertation completion, environmental aspects surrounding dissertation completion, and the internal or personal factors that may contribute to dissertation completion status, including dissertation self-efficacy. In their qualitative inquiry of the dissertation process in counselor education students, Flynn et al. (2012) identified three sets of factors that influenced the dissertation experience: (a) internal factors, such as personality traits, (b) relational factors, such as chair, committee, and family members, and (c) professional factors, such as financial resources. Relevant literature will be examined in these areas in order to better understand the gap in the current literature which the current study sought to address.

Doctoral Student Development

In order to understand the effects of different program and personal factors on doctoral students, it is necessary to first provide a conceptual framework for doctoral student development. It is imperative for counselor educators and universities to have a framework for doctoral student development so that they can develop specific interventions and strategies to target students at the most efficacious point during doctoral studies in order to improve outcomes. Several scholars have promulgated conceptual

frameworks for doctoral student development. Tinto (1993) advocated for research that would identify the factors that would either contribute to or detract from doctoral program completion and persistence. Tinto's model identified three stages of doctoral student development, beginning with the Transition stage, which occurs during the first year in the program. This Transition stage is characterized by doctoral students getting involved in the program both academically and socially. During the first year, doctoral students decide whether or not they will persist based upon the perceived rewards and costs of continuing. Candidacy is the second stage of Tinto's model, and it occurs during the second year of doctoral studies. This stage is characterized by the knowledge and skills that are needed to become a researcher and to complete the doctoral program. Persistence depends upon the students' skills and abilities during this stage. The final stage, or Doctoral Completion, occurs when students reach Ph.D. candidacy and ends with their dissertation defense. The skills learned during the Candidacy stage are used with the goal of completing the dissertation. Tinto noted that both program support and personal supports are key factors in whether students will persist through dissertation defense. Although Tinto proposed a model, it has never been quantitatively examined in order to identify the specific factors that affect dissertation completion or differences by students' classification as either a doctoral student or candidate.

Baird (1993) sought to develop a model of graduate student progress and proposed an "Integrated Model" (p. 8). The purpose of the model was to identify graduate students' relationships that influence retention, skill acquisition, and time to degree. Baird's Integrated Model is a synthesis of the following models of graduate student

development: (a) Hartnett and Katz's (1977) Psychological Model that focused on graduate students' personality development; (b) Tinto's (1993) Sociologically Oriented Model that identified the stages through which graduates who persist pass; and (c) Berkenkotter, Huckin, and Ackerman's (1991) Process Model that identified mastering the new ways of speaking, reading, and writing that are the norms in the student's future professional field as the most important developmental task for graduate students.

The purpose of the Integrated Model (Baird, 1993) was to offer a model that emphasized the most salient aspects of the graduate experience. Baird identified student socialization through relationships with faculty and with peers as the agents who define the performance standards to be met and the role that doctoral students occupy during their training. "Mastery experiences allow students to further develop their skills and to apply the conceptual principles they have learned during their training in the program" (p. 8). In Baird's model, support from faculty and family were conceptualized to increase doctoral student persistence. Conversely, poor social and academic relationships with faculty and classmates, poor family support, and the inability to master the program content all will lead to attrition. Baird's early contribution to doctoral student development provided a multi-dimensional theory for faculty and students to consider when evaluating doctoral student progress. The purpose of this model was to study time-to-degree as measured by dollars and years, and as such, it has not been tested or used to determine the effects of specific personal or program factors on dissertation completion.

Gardner (2009, 2010) proposed an empirically-based three-phase model of graduate student development that addresses doctoral students' experiences from a

programmatic perspective, including dissertation. Gardner's model is "primarily intended to give structure and focus to the multiple events and relationships that occur during the doctoral program, thereby facilitating a better understanding of the student's experience at particular turning points" (Gardner, 2010, p.64). Phase I of Gardner's model (2009, 2010) covers the time period from a student's admission into a doctoral program through the first two months of doctoral classes. Gardner (2009, 2010) proposed that this phase makes a strong impression on the student because the student makes a decision to commit to one program and begins to adjust to the role of doctoral student and the new faculty and peer relationships that are required. Students are also forming an understanding of what a future professional may require.

Phase II (Gardner, 2009, 2010) covers the period of time from the beginning of coursework through achieving doctoral candidate status. In addition to coursework, this phase encompasses the preparation for comprehensive examinations, working with faculty, having an assistantship, and selecting a dissertation advisor and committee. The relationships with faculty and colleagues are vital during this phase for a student's future success in the respective profession.

The final phase of doctoral student development is Phase III (Gardner, 2009, 2010), which is consumed by research and preparing for the job search. Dissertation research, including expanding the prospectus, conducting the research, writing the findings, and presenting the results, occurs during this phase. Changing relationships with faculty during this phase lead to an orientation toward a more "professionally-minded self" (Gardner, 2010, p. 65). This model provides another conceptualization of doctoral

student development and provides rationale for measuring dissertation self-efficacy at different measurement points in doctoral studies. Gardner's model (2009, 2010) elucidates some of the tasks that are the most salient to development, but it does not delineate between those doctoral students who complete their degrees and those who do not. Further, Gardner does not propose any factors that influence the development of these students. Doctoral students who have accomplished the phases will have completed their dissertations and degrees, yet this does not always happen as evidenced by the historical attrition rate.

A strength of the current study is that it is based upon models of doctoral student development which provide an understanding of the development of doctoral students who are able to complete their dissertations and their degrees. These models are theoretical and have been based primarily upon descriptive and qualitative studies of students. The counseling education discipline needs more empirical data in the form of quantitative research studies that examine the predictors for doctoral students to be able to complete their dissertations and then graduate, which these theoretical models describe.

The scholars who developed these theoretical models of doctoral student development have identified some factors that may affect doctoral student progress. Baird (1993) described the processes and interactions that are important for students to have in order to follow the prescribed course of doctoral student development that leads to completion. Baird identified that having supportive friends and family, having an assistantship, and being enrolled full-time are likely to help the student be successful.

Conversely, dropping out or slow progress is associated with poor social and academic relations with professors and fellow students, poor support from family and friends, work outside the university, part-time enrollment, and other commitments. Baird's model identified integrating students socially and academically into the department and carefully monitoring students' progress as methods that should lead to higher completion rates and shorter times to degree.

Gardner's (2009, 2010) three-phase model is based upon doctoral student socialization as the locus of the graduate school experience. Prior researchers have used socialization as a theoretical framework to understand the doctoral experience (Austin, 2002; Gardner, 2007; Soto Anthony, 2002). Specifically, a relationship between socialization and doctoral student attrition has been established, with researchers attributing poor or inappropriate socialization to a doctoral student's decision to depart the graduate program (Gardner, 2007; Golde, 2005; Lovitts, 2001). In a subsequent qualitative research study to understand how academic context and culture influenced the socialization of 60 doctoral students in six academic disciplines, including psychology, Gardner (2010) divided the participants into one of the three groups of Gardner's (2009, 2010) three-phase model. The doctoral program completion rate from the participants' six programs ranged from 17.6 % in Engineering to 76.5% in Communication, with Psychology having a 70.2% completion rate. The interview questions were focused on the doctoral students' experiences throughout their programs. Following the constant comparative method, Gardner (2010) identified the key issues, events, and activities that became the main categories of focus and also allowed the emergent themes to develop.

Findings from the Gardner (2010) study found four themes that described the doctoral students' socialization experience: (a) support, (b) self-direction, (c) ambiguity, and (d) transition. Support was defined as the process by which a student becomes part of the larger organization and learns how to interact with others and build relationships. Participants reported that support came from peers, faculty members, and others external to the program. Participants from the academic disciplines with the highest doctoral program completion rates used terms such as "family, camaraderie" and "constant support and encouragement" (p. 69) to describe their interactions with faculty, peers, and significant people to them. Gardner noted that for most participants in the study, the main source of support came from peers in the same program. One important difference emerged between participants from the highest- and lowest-completing academic disciplines, which was that in the lowest-completing disciplines, the primary source of support was from faculty and not from peers. Gardner theorized that international students seem to prefer faculty support more than peer support and that friends and family were the most important source of support for the international students.

Self-direction was the second theme that emerged from Gardner's (2010) study. Self-direction was defined as the growth that doctoral students undergo toward independence that results in original research and scholarship in their academic work. According to Gardner's (2009, 2010) model, doctoral students are expected to become more independent as they progress through each of the three phases. Some participants in the study enjoyed and accepted the challenge of independence in research and coursework as positive self-direction. Other participants, however, experienced self-

direction as negative and had felt “lost” (p. 71) and “in limbo” (p. 72), which created anxiety.

Ambiguity was the third theme that Gardner’s (2010) study found among the 60 doctoral students. Participants in all six academic disciplines experienced institutional ambiguity in the form of graduate school guidelines, regulations, and paperwork, which took different forms during the different phases of Gardner’s (2009, 2010) model. For example, doctoral student participants in Phase I experienced ambiguity when trying to understand graduate school expectations. Phase II participants experienced ambiguity surrounding examinations and the knowledge required of them. In Phase III, participants experienced ambiguity during the dissertation process when understanding how to research and how to write a dissertation were required.

The fourth and final theme that emerged from Gardner’s (2010) study was transition. Transition between roles and expectations was defined as the process of moving between the three doctoral student development phases (Gardner, 2009, 2010) and also moving from the student role to the professional role. Participants in Phase I (Gardner, 2009, 2010) transitioned to a new program culture and to a place where support had not been established yet. Phase II (Gardner, 2009, 2010) participants faced the transition to the new skills that are required for doctoral-level work, including scholarly writing. In Phase III (Gardner, 2009, 2010), transitioning to the dissertation stage and understanding the research process with its less structured method was a significant adjustment for participants in all six academic disciplines. This finding is important to the

current study because it is during the dissertation stage where dissertation self-efficacy affects dissertation completion.

Gardner (2010) also found that these four themes were similar across the six academic disciplines despite the large difference in completion rates. One limitation of the study was that the participants' completion rates were not measured. Rather, the historical rates from the students' respective academic disciplines were used, which prevented a precise measurement from these participants' experiences with their program completion rates. Gardner's three-phase model provided the doctoral student development theoretical framework through which results of the current study were interpreted.

Although the previously mentioned research has provided insight into factors related to dissertation completion in a variety of disciplines, a better understanding of the dissertation process in counselor education is needed. Dollarhide et al. (2013) conducted a grounded theory qualitative research study in order to describe the transformational tasks found in counselor education doctoral students. This cross-sectional study used interviews and focus groups with the 23 participants who were at different points in their program, ranging from first-year students to students who had completed their dissertations. This study concluded that counselor education doctoral students' identity begins as a counselor or clinician, then progresses to that of a doctoral student, and finally transforms into that of a counselor educator. The researchers found that the growth process was from "external validation by peers and professors" to "experience" gained by teaching, research, advising, and mentoring, and ended with "self-validation" gained by

success in all the activities of a counselor educator as evaluated by self, peers, and faculty (p. 142).

According to Dollarhide et al. (2013), success in transformational tasks was the essential factor that allowed participants to progress from one identity and growth stage to the next. This important concept is similar to Bandura's (1977) self-efficacy theory, where mastery experiences allow a person to increase belief that a task can be accomplished and that effort will be applied and sustained. Specifically, Dollarhide et al. concluded that for those participants who were in the dissertation stage, "the source of confidence came from performance" (p. 143). In addition, , peers and colleagues were sources of legitimacy for participants who were in the dissertation stage and provided an external source of validation, which Bandura (1977) would conceptualize as vicarious learning and verbal persuasion as sources for self-efficacy.

Because Dollarhide et al. (2013) used a cross-sectional design, results from the study showed differences by participants' year in the program. The source of validation was identified as being different for each year in the program. For example, first-year students' source of validation came from external sources, such as from professors and peers, while second-year students' validation came from participants' personal experience and accomplishments, and self was the source of validation for participants in the dissertation stage. Although the study's design did not measure dissertation self-efficacy or the factors that affect self-efficacy in counselor education students, the study's results are related to Bandura's (1977) sources of self-efficacy. Dollarhide et al.'s study did not include participants who dropped out of the program and did not complete their

dissertations, which leaves future researchers with the task of trying to understand the factors that predict dissertation self-efficacy as it relates to dissertation completion.

To date, no empirical studies have examined the program and personal factors that affect the dissertation self-efficacy of counselor education doctoral students and doctoral candidates by stage of development. Because of the lack of counselor education-specific empirical research, counseling faculty must attempt to extrapolate findings from other academic disciplines and implement them within their own departments.

Factors Influencing Dissertation Completion

Scholars have researched and concluded that there are myriad factors which influence doctoral students during their program, and these affect their ability to complete all of their requirements for the Ph.D. Within counselor education programs, program factors such as mentoring (Briggs & Pehrsson, 2008; Casto, Caldwell, & Salazar, 2005; Del Rio & Mieling, 2012; Ferrell, 2007; Flynn et al., 2012; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009), advising (Bridgmon, 2007; Burkholder, 2012; Cusworth, 2001; Del Rio & Mieling, 2012; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009; Willis & Carmichael, 2011), multicultural support (Henfield et al., 2013), program expectations and match (Carlson et al., 2006; Hoskins & Goldberg, 2005), department and academic culture (Burkholder, 2012; Protivnak & Foss, 2009), student orientation (Cusworth, 2001; Henfield et al., 2013; Protivnak & Foss, 2009), and others have all been shown to affect doctoral student performance. Personal factors have also been found to affect counselor education doctoral students' performance within their programs, such as finances (Breckner, 2012; Carlson et al. 2006; Cusworth,

2001; Flynn et al., 2012; Harsch, 2008; Protivnak & Foss, 2009; Willis & Carmichael, 2011), life stressors (Burkholder, 2012; Protivnak & Foss, 2009), work (Flynn et al., 2012; Willis & Carmichael, 2011), emotional support (Bridgmon, 2007; Carlson et al., 2006; Harsch, 2008; Protivnak & Foss, 2009; Trepal, Stinchfield, & Haiyasoso, 2014), time management (Flynn et al., 2012; Protivnak & Foss, 2009) and others (Burkholder, 2012; Harsch, 2008; Protivnak & Foss, 2009). Both program and personal factors have an effect on the dissertation experience and dissertation completion among counselor education students (Burkhard, 2012; Dollarhide et al., 2013; Flynn et al., 2012; Harsch, 2008) but no studies have examined the combination of these factors.

Bandura and Self-Efficacy

Bandura (1977) proposed an integrative theoretical framework to “explain and to predict psychological changes achieved by different modes of treatment” (p. 191) in an attempt to analyze “changes achieved in fearful and avoidant behavior” (p. 193). Bandura hypothesized that personal efficacy will determine how much effort and for how long that effort will be sustained when confronting obstacles and difficult experiences. Success requires persistent effort, even in the face of periodic setbacks, and personal efficacy will increase over time with periodic successes.

Bandura (1977) theorized that expectations of personal or self-efficacy are derived from four principle sources: performance accomplishments, vicarious experiences, verbal persuasion, and psychological states. Performance accomplishments, which are the first source of self-efficacy, are achieved through mastery experiences or successes and are the most reliable source of efficacy information because they are first-

hand experiences that an individual has had (Bandura, 1977). Bandura's self-efficacy model is predicated upon the theory that people's success will increase their belief in their capabilities, which in turn will result in reduced anxiety and increased coping of adverse events. Experiences that are initially perceived as failures but are then overcome through sustained effort increase self-efficacy and increase the perception that the most difficult tasks can be mastered (Bandura, 1982). It is important to note that an individual's level of self-efficacy can vary by task, meaning that self-efficacy can be high in one area and lower in another (Britner & Pajares, 2006). This factor is especially important in the area of dissertations as doctoral candidates have enjoyed academic success throughout their careers (performance accomplishments) and are now confronted with a dissertation that may represent the first and largest research project the student has faced.

Vicarious experience is the second source of self-efficacy in Bandura's (1977) theoretical framework. Expectations about one's ability to achieve are derived in part from observing others perform threatening activities without suffering adverse consequences and are identified as vicarious experience. By intensifying and persisting in their efforts, self-efficacy theory posits that they, too, will improve. Bandura and Barab (1973) conceptualized vicarious experience as people persuading themselves that if others can achieve this, then they should be able to achieve some improvement in their performance as well. Nonetheless, vicarious experience is a less reliable source of information about one's capabilities because it is based upon comparison to another and not upon personal accomplishments.

Verbal persuasion is the third source of self-efficacy. Bandura (1977) theorized that attempting to influence human behavior through verbal suggestion occurs when people are led to believe that they can successfully cope with what has overwhelmed them in the past. This source is considered weaker than performance accomplishments because individuals must rely on what others are telling them and do not yet possess any mastery experiences themselves. However, individuals who are socially persuaded that they possess the capabilities to master difficult situations and are given help are likely to put forth a greater effort toward a goal than those who are only given help without the social persuasion (Bandura, 1977). When the persuasion comes from people who are influential or accomplished, this can be a positive source (Bandura, 1986). For doctoral students during dissertation, persuasion from the faculty or dissertation chair may increase self-efficacy according to the model.

Emotional arousal is the fourth source of self-efficacy. Emotional arousal is generally connected with stressful situations which negatively impact performance, which means that individuals are more likely to expect success when their emotional arousal is low (Bandura, 1977). Fear, anxiety, and stress give rise to negative emotional arousal which can lead to thoughts that inhibit performance. Positive arousal, conversely, can lead to expectations of success and therefore increase self-efficacy, as opposed to negative arousal which is associated with lowered expectations and lower self-efficacy. The question of how this might play a role in dissertations has not been addressed.

Self-efficacy, then, can be defined as people's beliefs about their ability to put forth the effort (behavior) in order to achieve their goals (outcome). As a result, how

people will perform on a given task can often be better predicted by their beliefs about their capabilities to perform that task than by their actual capabilities (Varney, 2010). Smallwood's (2004) conclusion that among doctoral students, no academic difference exists between the doctoral students who complete their degrees and those who do not supports the construct of self-efficacy. In a previous study, undergraduate GPAs did not differ between those who completed their dissertations and those who did not (Lovitts, 2001).

Self-efficacy beliefs also influence the amount of effort that individuals will exert to accomplish a task. Bandura (1997) postulated that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively the case" (p. 2). Pajares (1997) concluded that self-efficacy beliefs help to determine how much effort individuals will apply to a certain activity and how long they will persevere. Higher levels of self-efficacy result in greater effort expended on that task. Bandura (1986, 1997) stated that individuals with low levels of self-efficacy do not expend considerable effort, and when they fail, they attribute their failure to their lack of ability, intelligence, and luck. Low self-efficacy, then, can result in failure to complete the dissertation (Faghihi, 1998). Because dissertation work requires an "extraordinary amount of personal responsibility, commitment, time, ...[and] cognitive effort" (Kelley & Salisbury-Glennon, 2016, p. 88), self-efficacy is a salient measure in dissertation completion.

The origins of self-efficacy were derived from psychological treatment (Bandura, 1977), and since that time, researchers and practitioners have applied the principles of

Bandura's self-efficacy model to many non-psychological areas. Bandura defined efficacy as "the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 193). One principle that underlies Bandura's framework is that when an individual increases effort and reduces anxiety, perceptions of an individual's self-efficacy will lead to success (Cervone, 2000).

Because self-efficacy beliefs can lead to motivation and accomplishment, researchers have applied the self-efficacy model to other areas in an effort to increase results for students, professionals, and many other groups (Varney, 2010). Self-efficacy has been researched in academic areas as a basis for predicting academic achievement in academic settings (Bandura, 1997; Britner & Pajares, 2006; Harsch, 2008; Pajares, 1996; Schunk & Pajares, 2002). For example, self-efficacy has been studied in educational achievement (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Schunk, 1994), academics (Pajares, 1996; Schunk & Pajares, 2002), and education (Varney, 2003). Academic self-efficacy measures the conviction that people can complete a specific academic task (Britner & Pajares, 2006), and the doctoral dissertation is an academic task that must be completed in order to complete the Ph.D. degree (Harsch, 2008).

Dissertation Self-Efficacy

Empirical studies have shown that the dissertation process can lead to anxiety, stress, and fear in some doctoral students (Blum, 2010; Bridgmon, 2007; Burkholder, 2012; Fitzgerald, 2014; McDermont, 2002). Because self-efficacy theory has its theoretical origins rooted in anxiety and fear among patients receiving psychological treatment, self-efficacy theory is also appropriate to examine the dissertation process

because of the anxiety and fear associated with it (Bako-Okolo, 1993). While self-efficacy has been studied in academic and other settings (Britner & Pajares, 2006; Pajares, 1996; Schunk & Pajares, 2002), the research on self-efficacy among doctoral students has been scarce (Bridgmon, 2007; Harsch, 2008; Varney, 2010). Even fewer empirical studies exist on self-efficacy and the dissertation. Self-efficacy is important to dissertation completion because self-efficacy in part determines the extent to which students believe they can complete all of the dissertation tasks. Varney (2003) began the study of dissertation self-efficacy because it is the point in the doctoral program which many students do not complete and therefore do not earn their doctoral degree. Varney (2003) created the construct of dissertation self-efficacy and defined it as “one’s confidence to successfully write the dissertation” (p. 10). Varney (2003) sought to test Pajares’ (1997) theory that the higher one’s self-efficacy, the greater that individual’s effort, persistence, and resilience will be in trying to achieve that task.

Several researchers have examined the factors that were hypothesized to influence dissertation self-efficacy. Varney (2003, 2010) surveyed 51 first- and second-year doctoral students in education who were part of Cohort I or Cohort II and were expected to complete their degrees in three years. The purpose of the study was to analyze the doctoral program components that included perceptions of the value of being in a cohort, mentoring, and dissertation preparation experiences on the outcome variable of dissertation progress. Dissertation self-efficacy was the mediating variable between the doctoral program components and the dependent variable of dissertation progress. The study followed a descriptive correlational, cross-sectional design method. Varney’s

research (2003) was trying to determine whether self-efficacy was a viable construct in relation to dissertation progress and further to determine its relationship to doctoral program components and dissertation progress. In order to measure this concept, Varney (2003, 2010) developed and tested the Dissertation Self-Efficacy Scale (DSES) using five validation procedures to explore and increase the reliability of the DSES ($\alpha=.94$). The results of the exploratory and confirmatory factor analyses on pilot data using a three- or four-factor latent solution indicated that the factors were highly intercorrelated with each other, which suggested that the DSES scale items were comprised of one factor and not three or four distinct factors. Varney identified this factor as dissertation self-efficacy, which explained 56% of the total scale variance.

The DSES (Varney, 2003, 2010) is a 16-item self-report instrument that was designed to assess a doctoral student's belief in the ability to perform the tasks required to complete a dissertation. Varney (2003) created this instrument because general research self-efficacy instruments lacked the unique items specific to dissertation, such as selecting a dissertation chair, forming a committee, drafting the proposal, and defending the dissertation. The DSES was hypothesized and designed to be more valid in assessing doctoral students' belief in their ability to complete the dissertation than research self-efficacy, which lacks the dissertation-specific tasks. Varney (2003) also developed and tested the Dissertation Progress Scale which was designed to measure dissertation progress by having participants answer yes, no, or does not apply to 28 items related to writing a dissertation. These 28 items can be categorized as: (a) planning for the dissertation, (b) formulating a question, (c) beginning and completing each chapter of the

dissertation, (d) proposing the dissertation and having it approved, and (e) defending the dissertation.

With that, Varney (2003, 2010) sought to determine whether students with higher dissertation self-efficacy scores would demonstrate the most dissertation progress. Results of Varney's study (2003) with 51 educational doctoral students were mixed. Varney's participants in the two different cohorts showed a statistically significant positive relationship between dissertation self-efficacy and dissertation progress ($r = .556, p = .000$). This result suggested that doctoral students who highly valued their doctoral program experiences and had higher levels of dissertation self-efficacy demonstrated greater dissertation progress than those who had lower dissertation self-efficacy and therefore demonstrated less dissertation progress. Varney's study (2003, 2010) provides the empirical link between dissertation self-efficacy and dissertation progress, which is critical to the current study. Varney (2003) also measured the three independent variables of program components (being in a cohort, being mentored, and dissertation preparation experiences) for any effects on dissertation progress and found no evidence of any relationship to dissertation progress. These three components, however, were instead found to be directly related to dissertation self-efficacy. To date, no quantitative data exist that predict dissertation self-efficacy from any factors within counselor education.

Within counselor education, one researcher has examined dissertation self-efficacy and its relationship to dissertation completion. Harsch (2008) conducted a nonexperimental survey of 243 doctoral students from CACREP programs who had

either completed their dissertations (n=111) or had completed all program requirements except their dissertations (n=132). Participants completed the Dissertation Self-Efficacy Scale (Varney, 2003), which was designed to assess doctoral students' perceived self-efficacy to write their dissertations. The DSES once again demonstrated high reliability ($\alpha=.90$). Results from the study found statistically significant differences on the dissertation self-efficacy measure between those who completed their dissertations and those who did not, with dissertation completers scoring higher in self-efficacy than those who did not complete their dissertations. Dissertation self-efficacy measured the specific dissertation tasks, known as structural demands, of writing the results section of the dissertation, formulating the research question or statement, and collecting adequate data records or field notes. A related result of this study further added to the empirical data on differences between factors that affect the length of time counselor education doctoral students take to complete their degrees. Specifically, advisor and family support, financial security, structural demands, satisfaction with the dissertation, and time limit influenced the amount of time students spent in "All but Dissertation" (ABD) status. These results provided "initial empirical data" (p. 95) on some of the factors that affect dissertation self-efficacy in counselor education students and also found that a positive relationship existed between dissertation self-efficacy and dissertation completion. The study lacked a theoretical model of doctoral student development which the current study sought to provide.

Whereas these results (Harsch, 2008) were important to establish empirical data in dissertation self-efficacy research in counselor education, the study had one limitation

which the current study attempted to avoid. Harsch surveyed two groups of doctoral students, and one group had completed their doctoral dissertations. Bandura's (1977) self-efficacy theory considers these participants as those who had a mastery experience and thus would be expected to have a high level of dissertation self-efficacy. Harsch did not measure research self-efficacy among the participants prior to administering the Dissertation Self- Efficacy Scale (Varney, 2003), which could have explained some of the dissertation self-efficacy variance between the dissertation completers and the non-completers.

Colvin (2012) conducted the third and final research study to date on dissertation self-efficacy study that used the DSES (Varney, 2003). Using an online survey, Colvin had two groups of participants from 92 academic majors from 46 universities in the United States. The first group consisted of 236 participants who were doctoral candidates and currently enrolled in the dissertation stage of their Ph.D. programs, and the second group consisted of 209 Ph.D. graduates who had already earned their Ph.D. degrees. The purpose of the study was to examine the relationship between dissertation self-efficacy and dissertation progress of Ph.D. candidates and Ph.D. graduates from various disciplines in order to understand how dissertation self-efficacy predicted dissertation progress. Results of the study concluded that: (a) dissertation self-efficacy had a significant and positive effect on the dissertation progress of the Ph.D. candidates as measured by the DSES, and (b) dissertation self-efficacy explained dissertation progress. Academic help-seeking attitudes and achievement goal orientations were also examined in the study and were not found to significantly contribute or predict dissertation progress

for the Ph.D. candidates. The group of Ph.D. graduates was not included in this analysis because they had already completed their dissertations and degrees. Colvin concluded that self-efficacy needs to be further explored because of the research studies that have found that dissertation self-efficacy positively contributes to dissertation progress (Faghihi, 1998; Harsch, 2008; Varney, 2003, 2010).

Colvin's (2012) study, however, did conduct independent t-tests in order to test for mean differences between Ph.D. candidates and Ph.D. graduates on dissertation self-efficacy. Results indicated that no significant mean differences in dissertation self-efficacy existed between the two groups of Ph.D. candidates and Ph.D. completers on the Holland categories of investigative and social. One limitation of the study was that it did not examine whether any of the 16 individual items on the Dissertation Self-Efficacy Scale significantly differed between the group of Ph.D. candidates and the group of Ph.D. graduates. Colvin used only a total Dissertation Self-Efficacy Scale score which precluded the analysis of determining whether any individual items significantly differed from one another between the two groups of participants. Another limitation of the study was that it did not include any doctoral students who had not reached candidacy status which precluded any analysis of development by student classification or changes in self-efficacy as students persist in their doctoral studies.

Research self-efficacy

Because educational institutions and the professional workforce have been negatively impacted by students who do not complete their dissertations, researchers and scholars from multiple disciplines have attempted to examine the problem of dissertation

non-completion, including counselor education. Within counselor education, research self-efficacy has been defined as “a person’s belief in his or her ability to perform a certain task (e.g., conducting research, developing scholarly works)” (Lambie & Vaccaro, 2011, p. 244). Research self-efficacy was first studied by Phillips (1992) using the Self-Efficacy in Research Measure which measured confidence or belief in successfully applying research skills and found statistically significant positive relationships between that instrument and doctoral student research productivity in counseling psychology. From that initial study, researchers and scholars in counselor education and other fields have conducted empirical studies in order to understand the role that research self-efficacy plays in doctoral education.

In 1993, Bako-Okolo created a questionnaire that was based upon Bandura’s self-efficacy principles to investigate the relationships between doctoral candidates’ research self-efficacy and their research training. All of the 127 participants in Bako-Okolo’s study were doctoral candidates in the College of Education at one university. Bako Okolo’s study concluded that research training and goal-setting significantly correlated with research self-efficacy but prior research experience did not significantly correlate with research self-efficacy. One recommendation from this study was that future researchers should conduct research in order to understand the factors that affect self-efficacy, which the current sought to do using dissertation self-efficacy.

Faghihi (1998) extended the empirical knowledge of research self-efficacy by conducting a mixed-methods study to examine factors that can significantly influence doctoral students’ progress during the dissertation stage. Specifically, Faghihi measured

the effects of research self-efficacy, research mentoring, and the research environment as potential influences on students' persistence during dissertation. All 97 participants were doctoral candidates in the College of Education at one university who had completed their comprehensive examinations. Of the 97 participants, 37 were in Counseling and Educational Psychology and Research. Results of the study (Faghihi, 1998) indicated that research self-efficacy had a significant effect on dissertation progress based upon the additional progress that participants with higher levels of research self-efficacy had made toward completing their dissertations. Higher research self-efficacy was positively related to dissertation progress. Further, participants who reported more positive and cooperative relationships with their advisors and committee members were more advanced in the dissertation process. One final result was that doctoral students who had graduate assistantships during their doctoral program reported higher levels of research self-efficacy and were more advanced in the dissertation process. Faghihi concluded that research self-efficacy was a function of a positive and nurturing research environment and a strong system of dissertation support and mentoring, which in turn can enhance students' success. These results are important yet limited because Faghihi did not control for time across all participants which precluded the ability to quantify the additional time that was required to complete dissertation tasks. Research self-efficacy was defined as participants' "level of confidence in conducting and executing different aspects of the dissertation, such as the literature review, topic selection, writing... [and] design and analysis in both quantitative and qualitative mode" (p. 61). These results further established an empirical link between research self-efficacy and dissertation progress.

Research self-efficacy has also been examined exclusively in counselor education research studies. Prior to their study, Lambie and Vaccaro (2011) found no counselor education studies on research self-efficacy. In 2011, Lambie and Vaccaro examined the levels of research self-efficacy of 89 doctoral students in CACREP-accredited counselor education programs using a cross-sectional, correlational research design. Participants were in either their first-, second-, or third-year of doctoral studies, and they rated the degree to which they felt confident in their ability to accomplish the tasks of choosing methods of data collection, performing experimental procedures, and synthesizing results with regard to the current literature using the Research Self-Efficacy Scale.

Results from this study (Lambie & Vaccaro, 2011; Vaccaro, 2009) found a positive correlation between research self-efficacy and scholarly publication experience, which means that doctoral students who had published a scholarly work scored at a significantly higher rate on the Research Self-Efficacy scale than those students with no scholarly publications. These researchers also concluded that participants' year in their doctoral program had a statistically significant influence on their research self-efficacy score, meaning that participants in their third year had significantly higher research self-efficacy scores than participants in either their first- or second-year in their doctoral program. These results support Bandura's self-efficacy theory that the most powerful source of perceived self-efficacy is performance accomplishment, which increases a person's ability to succeed in a certain task because "successes raise mastery experiences" (Bandura, 1977, p. 195). One limitation of this study was that research self-efficacy was not measured in terms of dissertation progress such that it is impossible to

determine what effect research self-efficacy might have on dissertation progress. A second limitation to this study is that doctoral students who were in their third year or longer were grouped together for analysis purposes and therefore any differences between doctoral students who are persisting for more than three years cannot be differentiated from third year students.

Petko (2012) examined research self-efficacy in 261 CACREP doctoral students in a cross-sectional, correlational design study in order to determine whether there was a statistical difference in research self-efficacy for students by the year in the doctoral program. Participants were in their first year, second year, or third year and beyond in their respective doctoral programs. Results of the study indicated that the doctoral students' year of study did influence research self-efficacy scores. A statistically significant difference in research self-efficacy scores existed between students in their first year of study and students in their second and third year (and beyond). Results from a least significant difference analysis showed that there was a statistically significant difference on research self-efficacy scores between counselor education students in their first year and those students in their third year and beyond and a statistical difference between students in their second year and those in their third year only. Year of study did have a significant impact on research self-efficacy for participants. Petko's research study was important because it further established a positive relationship between research self-efficacy and year in program which had not previously existed. The relationship between dissertation self-efficacy and student classification has not been established, which the current study sought to examine.

Personal and Program Factors

For decades, scholars have investigated and studied the problem of doctoral students who do not complete their dissertations and have attempted to quantify these results from myriad academic disciplines within the university setting. The results from these studies can be categorized as environmental factors, which can be divided into both personal factors and program factors. Harsch (2008) defined environmental factors as “circumstances external to the person that can either serve as barriers or facilitators to task completion” (p. 3). These environmental factors influence behavior, which in turn can become a source of self-efficacy that may increase or decrease over time. Prior research has found environmental factors to be salient in the study of doctoral dissertation completion (Colvin, 2012; Harsch, 2008). Examining environmental factors and their relationship to dissertation self-efficacy, however, is missing in the current counselor education literature. For the purpose of this study, the term program factors will be utilized to encompass those factors related to the graduate program that affect students while personal factors will be those factors that occur outside the purview of the graduate program.

Program factors have been identified from the literature and include: (a) mentoring relationships (Briggs & Pehrsson, 2008; Casto et al., 2005; Del Rio & Mieling, 2012; Ferrell, 2007; Flynn et al., 2012; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009), (b) emotional support from advisors (Del Rio & Mieling, 2012; Faghihi, 1998; Ferrell, 2007; Flynn et al., 2012; Kelley & Salisbury-Glennon, 2016), (c) academic culture (Burkholder, 2012; Protivnak & Foss, 2009), (d)

program match (Breckner, 2012; Cusworth, 2001; Hoskins & Goldberg, 2005), (e) dissertation chair and committee relationships (Fitzgerald, 2014; Flynn et al., 2012; Neale-McFall & Ward, 2015; Willis & Carmichael, 2011), and (f) faculty attrition (Breckner, 2012; Flynn et al., 2012). Personal factors identified in the literature include: (a) research self-efficacy (Faghihi, 1998; Flynn et al., 2012; Kelley & Salisbury-Glennon, 2016; Lambie & Vaccaro, 2011; Petko, 2012), (b) family and friend support (Carlson et al., 2006; Flynn et al., 2012; Harsch, 2008; Kelley & Salisbury-Glennon, 2016; Protivnak & Foss, 2009), (c) financial obligations (Breckner, 2012; Carlson et al., 2006; Flynn et al., 2012; Harsch, 2008; Kelley & Salisbury-Glennon, 2016; Protivnak & Foss, 2009), (d) overall satisfaction with the dissertation process (Flynn et al., 2012; Harsch, 2008; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015), (e) life stressors (Burkholder, 2012; Protivnak & Foss, 2009), and (f) procrastination (D'Andrea, 2002; Harsch, 2008; Kelley, 2011). The research studies that have identified these program and personal factors used qualitative, quantitative, and mixed-methods methodologies. The seminal research studies on factors that are related to dissertation self-efficacy and dissertation completion will be reviewed, followed by a detailed analysis of the program and personal factors to be examined in the current study.

Within the dissertation self-efficacy empirical literature, two researchers have found personal and program factors to have influenced dissertation self-efficacy or completion. Varney (2003, 2010) found that being in a cohort, being mentored, and dissertation preparation experiences were positively associated with dissertation self-efficacy. Harsch (2008) found the following factors of (a) financial support, (b) advisor

support, (c) family and friend support, (d) overall satisfaction with the dissertation process, and (e) time limit to complete the degree explained in part the time to degree completion. Other qualitative researchers have found both program and personal factors to have an effect on dissertation completion and the dissertation experience but dissertation self-efficacy was not considered.

Scholars have researched dissertation non-completion rates from multiple perspectives, including professors and dissertation advisers (D'Andrea, 2002; Knox et al., 2011), current doctoral students (Harsch, 2008; Kluever & Green, 1999; Protivnak & Foss, 2009; Ray, 2007), professionals who have completed their dissertations (Burkard et al., 2014; Flynn et al., 2012; Kelley & Salisbury-Glennon, 2016), and students who have not completed their dissertations (Bridgmon, 2008; Kelley & Salisbury-Glennon, 2016). The synthesis of this research, supported by empirical data, is that many factors influence dissertation completion rates and no one method or theoretical model of dissertation practice has been found. This current study was an attempt to use, and augment, the extant research in order to identify a new relationship using these studies' results to ultimately increase dissertation completion in counselor education students by increasing their dissertation self-efficacy.

Hazler and Carney (1993) sounded the initial clarion call for training future counselor educators when they stated, "It is time we increase the attention paid to those who train counselors and how they relate to students during that training" (p. 86). Hazler and Carney were looking toward the day when effective planning for counselor education students in their doctoral training programs would come about. Since that time,

researchers and scholars have conducted several initial empirical studies that have helped to create a first-look at the problem of dissertation non-completion in counselor education doctoral programs. The following counselor education empirical studies will be evaluated in order to provide a synthesis of their contributions and remaining deficiencies in understanding the problem of dissertation non-completion.

Prior to reviewing the counselor education research, it is helpful to first understand the current state of the dissertation in counselor education. Borders et al. (2015) completed a mixed-methods study which included faculty from 38 of the 59 currently existing and accredited CACREP doctoral programs. The purpose of the study was to understand these programs' dissertation formats, composition of dissertation committees, and faculty satisfaction ratings with the dissertation products and processes for the three years prior to the study (2012–2014).

Results from the study's survey indicated that in 76% of programs, nearly all of the students used a traditional dissertation design, which was four or five chapters (Borders et al., 2015). In terms of research methodology, all CACREP programs reported that their students collectively used quantitative, qualitative, and mixed-methods, with quantitative being the most frequently used and mixed methods being the least used. Dissertation committees generally consisted of three or four members, of which two or three were counselor education faculty. Most programs also had a non-counselor education faculty member on the committee. Counselor education faculty reported the following satisfaction levels with dissertation products: (a) 6% were not satisfied at all, (b) 19% had mixed satisfaction, (c) 11% were somewhat satisfied, (d) 50% were mostly

satisfied, and (e) 14% were very satisfied. Counselor education faculty generally felt that the rigor and quality of students' dissertations were lacking and needed to be improved. This study did not delineate the participants' ratings by dissertation completion status or dissertation self-efficacy, which precludes further analysis on factors related to dissertation non-completion.

The counselor education doctoral experience has been studied from both a qualitative and a quantitative perspective. The initial counselor education dissertation research was conducted using qualitative methods, and these research studies will be reviewed first. Dissertation completion in counselor education has some initial research findings that have contributed to the current body of knowledge that exists. By conducting a consensual qualitative research inquiry, Flynn et al. (2012) sought to understand the dissertation experience of counselor education doctoral students. Based upon the results of 42 counselor education graduates who had completed their dissertations, researchers proposed an emergent theory that included three spheres: internal (inside the individual), relational (interpersonal relationship or friendship), and professional. These spheres are interconnected and influence the dissertation experience, which lead to a satisfying or unsatisfying experience.

Flynn et al. (2012) found that students have a more satisfying dissertation experience when the following items occur: (a) faculty are aware of students' personal influences that either motivate or discourage students (e.g., child-care issues, peer support), (b) students have high research self-efficacy and internal motivation, (c) faculty support the students' research interests, (d) there is a "positive and supportive" (p. 252)

relationship between the chair and student, and (e) dissertation chairs have expertise in research and methodology and co-create deadlines with students. Conversely, the study found that factors such as poor faculty relationships, personal difficulties, unexpected life crises, and faculty personal issues were barriers to dissertation completion. Dissertation self-efficacy was not a variable in this study which limits its usefulness in understanding how these variables may influence dissertation completion.

Hoskins and Goldberg (2005) completed another empirical study examining doctoral student persistence in counselor education programs in order to determine the factors that influenced a student's decision to leave the program or to persist. In their qualitative study of 33 current and former counselor education doctoral students, researchers concluded the factor of student-program match, which can be defined as a multifaceted interaction between the student and various parts of the doctoral program, influenced the decision to persist or leave. Academic match and social-personal match were the two main components of student-program match that participants identified during their persistence decision-making process.

Academic match was operationally defined as the fit between the student's reasons for pursuing the degree, and the student's goals with the doctoral program's goals (Hoskins & Goldberg, 2005). Student-program match, however, was operationally defined as both student-faculty and student-peer relationships. In the study, participants noted that these relationships either helped or hindered their decision to persist. The researchers did find that student expectations influenced the persistence decision. According to Bandura (1977), expectations are related to self-efficacy by the self-belief

that an individual possesses. This study did not provide any data on how participants' self-beliefs may have influenced their ability to persist, and it did not provide any data on dissertation completion. Rather, the majority of participants who did not persist left their programs before reaching the dissertation stage.

Protivnak and Foss (2009), in their comparative analysis qualitative inquiry, sought to determine the themes that doctoral students perceived as their most influential experiences and whether these experiences helped or hindered their progress in their programs. Approximately 71% of the 141 participants had not begun working on their dissertations, which limits the value of the results to the current study. Researchers identified five themes from their qualitative inquiry: (a) departmental culture, (b) mentoring, (c) academics, (d) support systems, and (e) personal issues. Departmental culture, mentoring, and academics are classified as program factors, and support systems and personal issues are classified as personal factors in the current study's delineation of factors. Participants specifically identified personal issues such as stamina, financial difficulties, work-life balance, time management, and friendships as factors that influenced their doctoral program experience. Because most participants were not doctoral candidates, no dissertation theme emerged from the study. Participants who did cite dissertation as an influential experience generally found it to be a negative experience that was isolating and required a lengthy period of time. Although this study's results were additive to the counselor education literature, they did not measure the program and personal factors in relationship to dissertation completion or their influence on the participants' self-efficacy.

Burkholder (2012) studied the phenomenon of counselor education doctoral student attrition from the perspective of the student who had successfully returned to the program after voluntarily departing earlier. The researcher defined voluntarily departing from the program as having formally withdrawn for at least one semester and successfully returning was defined as resuming study for at least one year without any departures. The themes that emerged from interviews with the six participants were: (a) departure is informed by personal factors and academic culture, (b) departure and returning are salient personal events, and (c) faculty-student interactions are noticed and important (Burkholder, 2012). The data revealed that all participants in the study encountered events in their lives that negatively impacted their ability to continue in the program which led to their departure. Although personal and academic factors were the primary reasons that participants departed from their doctoral programs, they were not quantified and dissertation completion was not a variable used in the study.

Hughes and Kleist (2005) completed a grounded theory qualitative investigation of four first-year counselor education doctoral students in an attempt to understand the experience of first-year doctoral students in a CACREP-accredited program during their first semester. They described student development from an initial fluctuation of thoughts and emotions in the first several weeks of the semester (vicissitudes) to learning how to participate in the process of beginning doctoral study (integration) to confirmation at the end of the first semester (definite assurance of the capability to succeed). The researchers identified two constructs that are seminal to Bandura's self-efficacy theory and to the present study. First, the participants moved from the initial state of self-doubt where they

questioned their ability to succeed to a state characterized by an “emphatic belief in capability” (p. 101). Second, when participants moved to confirmation of their abilities, they were characterized by a “definite assurance of [the] capability to succeed (p. 101). In Bandura’s (1977) self-efficacy theory, these mastery experiences that these first-semester counselor education doctoral students accomplished should increase their self-efficacy beliefs based upon their first-semester mastery experiences. Hughes and Kleist’s study, however, did not map their participants’ development to a model of doctoral student development and the researchers did not measure any type of self-efficacy, which limits its application to the current study.

Willis and Carmichael (2011) examined the phenomenon of six counselor education doctoral students who withdrew from their programs during the dissertation phase, which they called “late stage of doctoral study” (p. 194). The purpose of the study was to add to the counselor education literature by examining the nature of the participants’ experience of doctoral attrition. Results of the study indicated that students’ attrition experience was one of “dropping out” or a positive experience of “leaving” (p. 196). A combination of barriers forced the dropping out participants to quit their programs during dissertation, even though they possessed the desire and energy to complete the remaining tasks. Willis and Carmichael’s participants identified these barriers as having a problematic chair relationship (program factor) and working as a counselor (personal factor). This study was significant in that it examined doctoral students during the dissertation phase and identified and corroborated earlier research on the salience of program factors (Bair & Haworth, 1999; Lovitts, 2001). These results

have limited applicability to the current study because the participants' dissertation self-efficacy was not included as a variable.

Breckner (2012) completed a phenomenological research study with nine counselor education doctoral students who had enrolled in a counselor education program and subsequently withdrew. The purpose of the study was to understand the experience of withdrawing from a counselor education program and what factors led to withdrawing. The results of this study found that students who withdrew from their doctoral programs did so because of program mismatch, financial considerations, and faculty attrition. Breckner's results were similar to Lovitts' study in 2001, which studied the problem of doctoral student-program mismatch. Breckner's results were also similar to the results of Hoskins and Goldberg (2005), who found that the factor of student-program match, which can be defined as a multifaceted interaction between the student and various parts of the doctoral program, influenced the decision to persist or leave. No single factor predicted student withdrawal in Breckner's research study. In addition, the study's nine participants withdrew at different times from their respective programs and the dissertation process was not examined.

Qualitative study of the counselor education dissertation experience has identified and highlighted themes from small groups of participants. These studies have been a vital step in beginning to understand the phenomenon of dissertation completion and some of the factors that may affect it. Although some personal and program factors have been identified qualitatively, measuring them through quantitative analysis is the next step in

understanding the problem of dissertation non-completion and providing solutions to increase dissertation completion through increasing dissertation self-efficacy.

The dissertation process within counselor education has also been examined using quantitative analysis as well. Harsch (2008) conducted a study to examine the effects of financial obligations, emotional support, and the structural demands of writing a dissertation on dissertation completion and non-completion. One purpose of the study was to explore whether the environmental factors of structural demands, emotional support, financial obligations, and time limit could explain differences in dissertation completers versus non-completers. Harsch found the factors of advisor support, family and friend support, financial security, structural demands, dissertation satisfaction, and time limit as variables that either increased or decreased the time to degree completion for 243 counselor education students who had either completed their dissertations or were currently working on their dissertations. Taken together, these variables accounted for 35% of the variance that existed in time to degree completion between those who completed their dissertations in a short period of time versus those who did not complete their dissertations in a reasonable period of time.

Another purpose of Harsch's study (2008) was to examine group differences between dissertation completers and non-completers on the constructs of dissertation self-efficacy, locus of control, and self-handicapping. Statistically significant differences existed between dissertation completers and dissertation non-completers on self-efficacy and self-handicapping, indicating that dissertation completers possessed higher levels of dissertation self-efficacy while having lower levels of self-handicapping behaviors than

non-completers. Taken together, self-efficacy, locus of control, and self-handicapping explained an additional 7% of the variance in time to degree completion between dissertation completers and non-completers. Dissertation completers scored significantly higher than dissertation non-completers on dissertation self-efficacy. Results of the study established the link between dissertation self-efficacy and dissertation progress, although participants who completed their dissertations were measured after they had completed their dissertations. The dissertation completers may have been influenced by their mastery experience of having successfully completed their dissertations. Harsch identified the lack of longitudinal or cross-sectional data as one limitation to the study. Harsch recommended that future studies focus on the development and changes in dissertation self-efficacy over time to understand how “self-efficacy initially developed, shifted over time, and potentially increased and/or decreased in certain situations that either evoked or did not evoke mastery experiences” (p. 96). This was the first research study found in the counselor education empirical literature to use quantitative methods to examine dissertation self-efficacy and dissertation completion.

A second research study in counselor education also used quantitative methods. In order to understand the factors that contribute to counselor education doctoral students' satisfaction with their dissertation chairperson, researchers conducted a multiple regression analysis in order to predict doctoral students' and recent graduates' overall satisfaction with their chairperson (Neale-McFall, 2011; Neale-McFall & Ward, 2015). Of the 122 counselor education participants in the study, 71 (58%) were doctoral candidates and 51 (42%) had completed their dissertations and doctoral degrees. The

researchers found that participants' perception of their ability to collaborate with their dissertation chair was the most influential factor in predicting overall satisfaction in the relationship between the two from the students' perspective.

Another result from this study (Neale-McFall, 2011; Neale-McFall & Ward, 2015) found that the chair's work style and the personal connection between the doctoral student and the chair significantly predicted overall student satisfaction with the dissertation chair. Specific chair actions that contributed to students' satisfaction were providing effective feedback, speaking in "we" terms versus "you" terms, providing appropriate structure, and discussing expectations prior to beginning the dissertation. The researchers concluded that chairpersons' behaviors that were found to significantly contribute to students' overall satisfaction "seem to center on personal, mentoring, and validating behaviors" (Neale-McFall, 2011, p. 190), which Bandura (1977) might classify as a verbal persuasion source of self-efficacy.

Fitzgerald (2014) conducted a casual-comparative quantitative study with correlational research methods in order to examine dissertation stress in 262 doctoral students in counselor education, counseling psychology, and clinical psychology. Results from the study indicated that as doctoral students' perception of their personal control and stability decreases, they will experience more stress in relationships with faculty members, more difficulty organizing and staying committed to dissertation tasks, and more difficulty with the statistics portion of the dissertation. Fitzgerald also found that the factors of current stress level and dissertation chair structure predicted dissertation stress in doctoral students. Although Fitzgerald did not measure dissertation self-efficacy or

dissertation completion, the results from this study identified dissertation stress as influencing doctoral students' dissertation experience and performance.

Bridgmon (2007) conducted a multiple regression analysis with 124 ABD doctoral students from counselor education, counseling psychology, and clinical psychology programs. All of the participants were doctoral candidates who had not completed their dissertations and the mean number of years in the doctoral program was 5.7 years and 80% were enrolled as full-time students. The purpose of the study was to determine whether any factors could significantly predict ABD stress. Results from the analysis indicated that participants reported more stress when the following factors were present: (a) low dissertation chair structure, (b) lower interest in research activities, (c) current stress, and (d) interpersonal break-ups during the doctoral program. These four factors were able to significantly predict dissertation stress in ABD students. This study was important because it identified factors that can predict stress in doctoral candidates, but the study did not examine how stress may have influenced dissertation self-efficacy or dissertation completion.

The extant counselor education empirical data related to dissertation self-efficacy and the factors that may influence it are still relatively unexplored. While some factors have been investigated that affect dissertation completion and satisfaction, primarily through qualitative inquiry (Flynn et al., 2012; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009), dissertation self-efficacy has been examined in only one counselor education study with doctoral students (Harsch, 2008). In the remaining research studies that have used counselor education doctoral students, program

and personal factors have been examined in the context of dissertation experience and satisfaction. Because of the relative lack of research within counselor education, academic disciplines related to counselor education must be reviewed in order to understand relevant data on dissertation self-efficacy.

Non-Counselor Education Dissertation Studies

Academic disciplines outside of counselor education have also examined the problem of doctoral students who do not complete their dissertations. In an attempt to identify the obstacles that lead to students failing to graduate because they do not finish their dissertations, D'Andrea (2002) surveyed 215 deans, chairs, and professors of education in colleges of education in 42 states using quantitative methods. The study's results suggested that doctoral students fail to complete their dissertations because of academic competencies (inadequately prepared for doctoral-level scholarship), personal characteristics (procrastination, dependency, and unrealistic thinking), difficulty with writing a proposal, and life situations (finances and stressful personal relationships).

Personal factors and program factors were examined in a mixed-methods, quasi-experimental research design. Kelley and Salisbury-Glennon (2016) examined self-regulated learning strategies, intrinsic work value, and the factors of financial support, social support, research self-efficacy, field of study, and gender on doctoral students' time spent in ABD status. Of the 140 participants from different fields of study, 95 were doctoral candidates classified as ABD and 45 had completed their dissertations within the past six months before the study began. Participants' fields of study included hard sciences, physical sciences, social sciences, and others all at one university. The purpose

of the study was to determine the levels of intrinsic task value and self-regulation that doctoral students demonstrated who were classified as ABD.

Data were collected using different instruments and scales (Kelley & Salisbury-Glennon, 2016). Financial support was collected using a five-question demographic questionnaire that contained two quantitative and three qualitative questions. Program support and family and friend support data were collected using the 25-question Social Support Inhibitors Scale that was adapted from the Inventory of Parent and Peer Attachment Scale (Armsden & Greenberg, 1987), which demonstrated moderately high reliability. Kelley and Salisbury-Glennon (2016) assessed the social support that doctoral students received from peers, parents, committee members, and co-workers. Results from the study found that financial assistance, social support, and friends and family were statistically significant predictors of participants who successfully completed their dissertations. Qualitative analysis of the data indicated the importance that the role a mentor or dissertation advisor had in dissertation outcomes. These results were consistent with other research studies within counselor education that have examined the relationship between dissertation outcomes and: (a) mentors (Breckner, 2012; Burkholder, 2012; Faghihi, 1998; Flynn et al., 2012; Harsch, 2008; Hosking & Goldberg, 2005; Neale-McFall, 2011; Protivnak & Foss, 2009; Willis & Carmichael, 2011), (b) finances (Carlson et al., 2006; Harsch, 2008; Protivnak & Foss, 2009; Willis & Carmichael, 2011), and (c) family and friend support (Carlson et al., 2006; Flynn et al., 2012; Harsch, 2008; Protivnak & Foss, 2009).

The field of psychology has also examined doctoral students closely and has identified the following factors as influencing doctoral students' performance and experience during the dissertation stage: (a) perception and experience of the research process (Burkhard, 2012), (b) dissertation advisor and doctoral student relationship (Barnes, Williams, & Archer, 2010; Cusworth, 2001; Knox et al., 2011; Schlosser et al., 2003), and (c) student personal characteristics of work style, motivation, and interpersonal qualities (Knox et al., 2011).

Two qualitative studies in the field of psychology have provided important empirical data in the dissertation experience. Burkard et al. (2014) used a mixed-method approach to explore the dissertation experiences of 25 recent clinical and counseling psychology doctoral students in order to more fully understand the factors that contributed to their dissertation being self-rated as positive or negative. A second goal of the study was to understand the experiences of the doctoral program on the students themselves. The researchers were also interested in the effects of research self-efficacy on the dissertation experience. Participants were from different doctoral programs, and 12 participants rated their dissertation experience as positive and 13 of the participants rated their dissertation experience as negative.

One of the themes that emerged from the data (Burkard et al., 2014) was the doctoral student's relationship with the dissertation chair. Participants who rated their dissertation experience as positive generally described their relationship with their chairs as positive, responsive, and supportive. In addition, these participants noted that their dissertation chairs provided structure and guidance during the dissertation process.

Conversely, participants who rated their dissertation experience as negative typically had negative relationships with their chairs and indicated that their chairs were non-responsive with limited availability for meetings. The importance of advising and mentoring in this study mirrors the relevance of support in numerous counselor education studies (Breckner, 2012; Burkholder, 2012; Faghihi, 1998; Flynn et al., 2012; Harsch, 2008; Hosking & Goldberg, 2005; Neale-McFall, 2011; Protivnak & Foss, 2009; Willis & Carmichael, 2011).

Support was another theme that emerged from the data (Burkard et al., 2014). All participants indicated that the support that they received during the dissertation process was positive, including those participants who rated their overall dissertation experience as negative. Support for doctoral students who had a negative dissertation experience came from multiple sources, including family, friends, dissertation chair, committee members, and others, both inside and outside of the academic program. The importance of support in this study was similar to the salience of support in counselor education studies (Carlson et al., 2006; Flynn et al., 2012; Harsch, 2008; Protivnak & Foss, 2009).

Knox et al. (2011) conducted a consensual qualitative research study in order to understand the experience of 14 clinical and counseling psychology faculty who chaired both positive and problematic dissertations. The purpose of the study was to understand the faculty's experience of what contributed to both positive and problematic dissertation experiences and also to understand the faculty's perception of the roles and responsibilities of both the chair and the student in the dissertation process. Participants in the study categorized 84% of the dissertations that they chaired as positive dissertation

experiences. Results of Knox et al.'s study were similar to that of Burkard et al.'s (2014) study where doctoral students who had completed their dissertations were the participants. In Knox et al.'s study, researchers found that positive dissertation experiences from the dissertation chair's perspective were characterized by good relationships between themselves and the doctoral student, and problematic dissertation experiences were often characterized by poor relationships between the dyad. One of the roles that more than half of the participants identified as being their responsibility was to provide emotional support and motivation to the doctoral student during the dissertation. Researchers found that these dissertation chairs provided this support to students during both positive and problematic dissertation experiences.

Factors Selected for Study

The available empirical counselor education literature contains research studies that have examined the dissertation process and related phenomena. One result of this effort has been the identification of multiple variables and types of factors that are related to the dissertation experience. For example, program factors, personal factors, and intrapersonal factors have been examined in different studies related to the dissertation experience and outcome. Because most of the studies used small sample sizes and qualitative methods, factors have been identified but have not been quantitatively tested. This lack of quantitative investigation and measurement may result in the inability to identify relationships among various factors that may influence the dissertation experience and outcomes. More specifically, these factors have not been examined in

their relationship to dissertation self-efficacy, which has been shown to quantitatively affect dissertation completion (Varney, 2003, 2010).

Another limitation of the extant counselor education empirical literature is that relationships among the identified factors have not been examined in combination to determine the effects on dissertation self-efficacy which in turn may be related to dissertation completion. Harsch's (2008) examination of the role of self-efficacy, locus of control, and self-handicapping on dissertation completion is the only quantitative research study using only counselor education participants that has been conducted. The current study sought to examine the effects of the following seven factors on dissertation self-efficacy: (a) advisory relationship, (b) program climate, (c) emotional support, (d) life stressors, (e) finances, (f) procrastination, and (g) student classification. Although these factors have been identified through primarily qualitative research methods, they were measured using quantitative methods in the current study. In addition, any relationships among these seven factors can be determined during their quantitative examination.

Advisory Relationship

Mentoring and advising can occur at all stages of doctoral study, from initial enrollment through completion of the degree. Within counselor education programs, advising and mentoring can occur both formally and informally, from program chairs, dissertation chairs, and other faculty in whom students find mentors. Schlosser et al. (2003) defined advisor as "the faculty member who has the greatest responsibility for helping guide the advisee through the graduate program" (p. 179). The literature on

doctoral programs contains terms such as advisor, mentor, committee chair, and dissertation chair to identify the individual who performs the roles and functions that are required for a doctoral student to successfully transition from a student to a professional colleague (Gelso, 1993; Schlosser et al., 2011). In the current study, advisory relationship was used as the name of the program factor or variable under investigation, although the literature reviewed in this section will employ the term that the researchers used in their original research studies.

Most of the counselor education research studies and conceptual articles that have examined the doctoral program experience, dissertation experience, and dissertation outcomes have found the advisor and the advisor-advisee relationship to be salient (Bridgmon, 2007; Briggs & Pehrsson, 2008; Burkholder, 2012; Casto et al., 2005; Del Rio & Mieling, 2012; Ferrell, 2007; Flynn et al., 2012; Harsch, 2008; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009; Willis & Carmichael, 2011). Researchers have empirically established the importance of the advisor and the advisor-advisee relationship, which is the reason that this factor was examined in the present study. Dollarhide et al. (2013) identified the transformational tasks of counselor education doctoral students, from incoming counselor or clinician to the new counselor educator who emerges at the conclusion of the doctoral program. The doctoral program faculty (e.g., advisor, mentor, chair, etc.) are involved in all of the steps and tasks with the student throughout the program, which highlights the critical function of the advisory relationship.

The importance of the doctoral program advisory relationship is ubiquitous. Several themes have emerged from the counselor education literature, and the literature in this section will be reviewed by the following themes: (a) advisory relationship's effect on persistence, (b) advisor qualities, and (c) dissertation advising. Three counselor education qualitative studies that examined attrition have found that the advisory relationship had a direct effect on the student's decision to withdraw (Burkholder, 2012; Hoskins & Goldberg, 2005; Willis & Carmichael, 2011). Burkholder examined the phenomenon of six counselor education doctoral students who had withdrawn from their program for at least one year and subsequently returned to the same program to complete it. One of the themes that emerged was that faculty-student interactions are noticed and are important. Participants experienced the faculty's response to their departure and return as either helpful or unhelpful. Burkholder concluded that faculty members who are perceived as unhelpful have a "significant negative impact on their students" (p. 19). Burkholder also concluded that faculty have the unique ability to mediate the experience and ability of a student to depart, persist, or return to study.

Willis and Carmichael (2011), in their qualitative investigation of six counselor education students who withdrew during the dissertation stage of their programs, found that a problematic chair relationship was a barrier that led to withdrawal. Participants were left "without a guide to navigate them through the most difficult academic journey they had ever attempted" (p. 197). Among the participants, they felt harassed, abandoned, unsupported, and in need of a mentor.

Hoskins and Goldberg (2005) conducted a qualitative study with 33 current and former CACREP doctoral students in order to determine the factors that influenced students to either withdraw or persist. Social-personal match, which focuses on students' relationship with faculty and peers, was found to affect persistence. Participants reported that positive relationships with faculty members influenced them to persist in their doctoral studies, while participants might consider withdrawing when the lack of connection was too detrimental. Hoskins and Goldberg concluded that faculty relationships were more important than peer relationships in influencing persistence, which is the reason why a peer measure was not included as a factor to be measured in the current study.

Advisor qualities is the second area of the advisory relationship that the counselor education doctoral program literature has identified as having an effect on dissertation experience and outcomes. Casto et al. (2005) wrote a conceptual article on guidelines for female counselor education mentors and mentees. The authors identified both the formal and informal roles that mentors have in doctoral study. They defined the multi-faceted role of mentor as one that included teacher, counselor, role model, guide, and friend. The authors also suggested that faculty mentors devote time, maintain boundaries, and set expectations. Flynn et al.'s (2012) qualitative inquiry of 42 counselor education doctoral program graduates found that the advisor qualities of providing structure, motivation, deadlines, and mentoring typically led to a positive and supportive relationship between advisor and student. Problematic relationships with advisors, less enthusiastic chairs, and lack of chair involvement led to negative experiences that became a barrier to dissertation

completion. Del Rio and Mieling (2012) corroborated these helpful advisor qualities in their conceptual article on what counselor education doctoral students should seek in a doctoral advisor. They recommended that the advisor possess the qualities of commitment to deadlines, enthusiasm for the dissertation, and willingness to support the student. In their qualitative study of the influential experiences of 141 counselor education doctoral students, Protivnak and Foss (2009) found mentoring to be the most helpful experience in their doctoral studies. The researchers concluded that the mentoring relationship should promote student growth and development. Ferrell (2007) examined the personal experiences of 66 counselor education doctoral students in a mixed-methods study and identified five overarching themes for the most important aspects of mentoring. The mentor quality of genuineness, which includes acceptance, accessibility, honesty, and support, conveyed authenticity to mentees. Cusworth's 2001 qualitative study of nine first-year counseling doctoral students concluded that advisors who were a "good fit" (p. 7) provided structure and made contact with the student. Similarly, Henfield et al. (2013) conducted a qualitative investigation of 11 African-American counselor education doctoral students at Predominantly White Institutions (PWI) in order to understand their perceptions. The researchers found that having a personal and professional relationship with their advisor significantly contributed to their ability to be successful in their doctoral program. The findings of these qualitative studies created an initial understanding of advisor qualities that affect the doctoral program experience. This was an important first step in counselor education. These studies, however, have not

examined the relationship that advisor qualities may have on dissertation outcome or dissertation self-efficacy, which the current study sought to do.

Conversely, participants reported a negative experience when the advisor did not understand the student or program well. Neale-McFall and Ward (2015) conducted a quantitative inquiry of 133 counselor education students in order to examine the chair behaviors that predicted overall student satisfaction with the dissertation chair. Results of the study found that the chair behaviors of personal connection and work style significantly predicted students' overall satisfaction with their dissertation chair. The quantitative examination of chair behaviors supplemented the existing advisory relationship literature, which was important. The measurement of these qualities on dissertation outcome, however, was still missing. Another limitation of this study was that it measured only dissertation chairs and not the advisor or program chair that may influence the student's dissertation self-efficacy much earlier in the program, which the current study attempted to do by measuring the advisory relationship, student classification, and dissertation self-efficacy.

Dissertation advising is the third area of the advisory relationship that the counselor education doctoral program literature has identified as influencing dissertation experience and outcomes. One outcome from Harsch's (2008) quantitative research study of self-efficacy, locus of control, and self-handicapping on dissertation completion in counselor education was that emotional support from an advisor shortened time-to-degree completion. Bridgmon's (2007) quantitative study of the variables that led to ABD stress in counselor education, counseling psychology, and clinical psychology doctoral students

found that a model containing low dissertation chair structure predicted higher levels of participant stress. Further, Harsch's review of the multi-discipline dissertation literature revealed that issues involving the dissertation chair was second in the rank-ordering of categories negatively influencing dissertation completion. Fitzgerald (2014) conducted a quantitative study of 262 doctoral candidates in counselor education, counseling psychology, and clinical psychology programs in order to examine the relationship of causal attributions to dissertation stress. Results of the study indicated that dissertation chairs' degree of structure contributed to significantly predicting doctoral student stress during the dissertation. Fitzgerald's study was important because it established an empirical link between a dissertation chair's degree of structure and dissertation stress. This study did not attempt to measure any relationship that the chair's degree of structure might have had on dissertation self-efficacy or its relationship to other factors, such as life stressors and procrastination, which the current study attempted to measure.

Program Climate

Program climate in doctoral programs has been examined in the counselor education qualitative literature (Breckner, 2012; Burkholder, 2012; Cusworth, 2001; Henfield et al., 2013; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009). Within counselor education doctoral programs, program climate is comprised of academics, department culture, and student orientation, all of which influence both the academic match and the social-personal match. Program climate affects the interaction between the doctoral student and various parts of the program, and also affects attrition (Hoskins & Goldberg, 2005). Researchers have concluded that the relationship between the student

and the doctoral program is influential in the decision for doctoral students to persist or leave (Breckner, 2012; Burkholder, 2012; Hoskins & Goldberg, 2005). These qualitative studies have identified an initial and important relationship between program climate and the doctoral program, including the dissertation experience. The current study attempted to examine the relationship between program climate and dissertation self-efficacy using a quantitative research methodology.

Hoskins and Goldberg (2005) conducted a qualitative study with 33 doctoral students and graduates in 17 different CACREP-accredited doctoral programs using in-depth interviews in order to understand the factors that influenced students' decisions to persist or to leave their programs. The researchers followed an analytic induction research methodology and used Tinto's (1993) doctoral student development model as a framework. Results of the study found that the two main components that comprised program climate were academic match and social-personal match. The researchers defined academic match as the comparison of the reasons why students pursue the degree and their goals with the doctoral program's focus of either educator, practitioner, or researcher. Social-personal match was defined as student relationships with fellow students and faculty. Student expectations and student experiences were also identified as important to the program climate, but less important than academic match and social-personal match. Participants who left their programs either temporarily or permanently all reported an incongruity between themselves and their program, known as a program mismatch.

Academic match was the first main component in Hoskins and Goldberg's (2005) study. Participants in the study reported that the fit between their reasons for pursuing their doctoral degrees, personal goals, and professional goals with the program's focus and curriculum was salient when determining whether to persist or leave. For example, students who entered their doctoral programs with the intent to become practitioners generally found themselves frustrated and disappointed with a program whose focus was perceived as research. In these cases, an academic mismatch occurred, which was an incongruity between what the students wanted from the program and what the students perceived the program was preparing them to do after graduation. In this study, all of the participants who left their program did so before they reached the dissertation stage, which limits the results of the researchers' conclusions for the current study. This academic match was examined in the current study through the survey item of "The program supports my career goal of becoming an educator or becoming a practitioner or supervisor." The current study, however, attempted to measure this program climate quantitatively across all doctoral students, including those in the dissertation stage.

Social-personal match was the second main component that Hoskins and Goldberg (2005) reported from the results of their study. Participants felt that their relationships with faculty and their fellow students, and the quality of these relationships, significantly affected their decision to persist or leave. The researchers found that all participants stated the importance of these faculty and peer relationships, and that the faculty relationships and their quality had a stronger influence in their decision to persist or quit than peer relationships. This social-personal component of the program climate

was examined in the current study through the survey items of: (a) faculty respect me for who I am as a female, male, or transgender person, (b) doctoral student opinions are valued by the faculty, and (c) I feel supported by faculty in my counseling theoretical orientation.

Protivnak and Foss (2009) conducted a comparative analysis qualitative inquiry in order to determine the themes that doctoral students perceived as their most influential experiences and whether these experiences helped or hindered their progress in their programs. Researchers identified five themes from their qualitative inquiry: (a) departmental culture, (b) mentoring, (c) academics, (d) support systems, and (e) personal issues. In this section on program climate, department culture and academics will be reviewed. Some participants experienced department culture as being collaborative, inclusive, and respectful, which helped their doctoral program progress. The negative effects of department culture, such as being competitive, political, uncompromising, judgmental, intolerant, and racist, adversely affected their doctoral program experience and hindered their progress. Protivnak and Foss also found academics to be an influential theme that influenced students' program progress. Academics referred to program information, coursework, and the dissertation process. Participants reported that the negative experiences of extensive research coursework, unreasonable writing level expectations, and dissertation committee delays hindered their progress. Although this qualitative study provided important information on program climate, the study's results are limited because no student classification data were reported and the influential experiences that helped and hindered participants' progress were not further analyzed.

The researchers recommended that a national quantitative study of factors that influence attrition and retention in counselor education doctoral programs be undertaken. The current study sought to begin this quantitative investigation by examining the relationship of program factors, including program climate, to dissertation self-efficacy.

Breckner (2012) conducted a qualitative investigation of doctoral student attrition with nine counselor education doctoral students who withdrew during their doctoral studies. Six of the participants withdrew after their first year of doctoral studies, and only one participant withdrew while in the dissertation stage, which is one limitation of that study. Participants reported the following negative themes that influenced their decision to depart: (a) program-student mismatch, (b) program intensity, (c) program politics, and (d) program initiation and hazing rituals. Program-student mismatch was the most widely-reported negative experience that participants reported while enrolled in their programs. Participants experienced program-student mismatches as a difference between participants' program goals and the program's focus (research, practice, or teaching), which led to participants feeling frustrated and powerless. Program politics also negatively affected some participants because participants felt that they had to choose between faculty members who did not get along with one another. Program politics made these participants feel uncomfortable and viewed the faculty's behavior as unprofessional.

Henfield et al. (2013) conducted a qualitative investigation of 11 African American counselor education doctoral students at Predominantly White Institutions in order to understand their experiences with race. The researchers used critical race theory

in order to “expose the salience of race in students’ perceptions” (p. 124) of their challenging experiences. Results of the study found that three themes described the challenging aspects of their doctoral programs: (a) feelings of isolation, (b) disconnected peers, and (c) lack of cultural understanding. Participants reported that poorly-designed program orientations, subtle racism, small classrooms and programs that felt suffocating, and feeling pressured to conform to the majority culture were challenging experiences. Several participants reported that they were not able to pursue their research agendas because the faculty were not supportive and the students felt powerless. The lack of faculty respect for student differences resulted in poor mentoring relationships with the participants and participants who perceived that they were marginalized. Although the results of Henfield et al.’s study adds vital information to the literature, it did not provide any analysis of how these challenging experiences affected the participants’ dissertation outcome or program completion rate because dissertation status was not reported. The researchers, however, advocated that future counselor education research studies should examine the relationship of the advisor to the student, which the current study will seek to do. In addition, one item in the current study’s survey was used to examine the program’s cultural understanding and respect: “My cultural heritage and how these views inform my understanding are valued by the faculty.”

Burkholder (2012) followed a qualitative, phenomenological research design in order to understand the experiences of six counselor education doctoral students who voluntarily left their doctoral programs and then returned after more than one year’s absence to complete their doctoral degree. Results of the study identified four themes that

described the participants' experiences of leaving and subsequently returning: (a) departing and returning are salient personal events, (b) faculty-student interactions are noticed and important, (c) departure is informed by personal factors, and (d) departure is informed by academic culture. Academic culture was one aspect of program climate that the current study examined. Participants in Burkholder's study departed from their doctoral program because of interactions with the counseling department, staff, and faculty. Faculty attrition, unprofessional faculty, nonresponsive staff and faculty, and faculty who did not appreciate or respect students all contributed to participants departing from their doctoral program. Burkholder concluded that personal and academic factors were the primary reasons why students left their programs, and therefore recommended that quantitative research studies be conducted to study retention and attrition in counselor education programs. One limitation of Burkholder's study was that no data were reported on the point at which participants departed from their program,

Cusworth (2001) conducted a qualitative study interviewing nine, first-semester counseling psychology doctoral students in order to understand their impressions of their doctoral program orientation experience. Results of the study found that lack of faculty support to help students secure funding, departmental disorganization, lacking information about the program and the university, interpersonal difficulties with staff, and an uninformative orientation meeting were program climate factors that affected participants. Cusworth recommended that doctoral programs focus on funding and departmental organization as methods to improve the doctoral program experience. Two limitations of Cusworth's study were that the sample size was small and that the

discussion was limited. The current study will sought to provide quantitative data on program climate factors and their relationship to dissertation self-efficacy.

Social Support

Social support from family and friends, including peers, has been examined in the counselor education literature. Support from peers has been found to increase research skills and productivity (Dollarhide et al., 2013), positively influence the doctoral program experience (Flynn et al., 2012; Protivnak & Foss, 2009), provide motivation to persist in doctoral studies (Carlson et al., 2006; Hoskins & Goldberg, 2005), and provide help during difficult times (Carlson et al., 2006). Researchers have concluded that support from friends and family is influential and important to doctoral students (Flynn et al., 2012; Protivnak & Foss, 2009). These qualitative research studies provided the initial identification and importance of the social support factor in the counselor education doctoral experience. Quantitative examination is needed in order to determine any relationship that the social support from family, friends, and significant others may have to dissertation self-efficacy, which the current study attempted to measure.

Flynn et al. (2012) found that the environment impacted participants' ability to feel motivated throughout the dissertation process and to complete it. Family support was rated as meaningful to the process. Protivnak and Foss (2009), in their qualitative study of 141 counselor education doctoral students, found that one of the themes that both negatively and positively affected their doctoral program experience was support systems. Support systems were operationalized as the involvement of friends, family, and peers in the lives of the participants. The positive aspects of support systems included

being able to share the doctoral experience with caring and supportive people, having family members contribute to family care, and being a member of a cohort. The negative aspects of support systems were having to care for family members at times when the doctoral program was demanding, less time to spend with members of the support system, and feeling guilty about not being able to spend time with loved ones. Many participants reported that having more system support would be most helpful in their doctoral program.

Kelley's (2011) quantitative study included 95 doctoral candidates and 45 participants who had recently completed their doctoral degree in many fields, including education, social sciences, and humanities. As a covariate predictor, friend and family support were significant in influencing dissertation time to completion. Participants completed a 25-item questionnaire in which they rated the extent to which they agreed or disagreed with the support they received with respect to working on their dissertations from peers, family, dissertation committee, department, and employers. In the qualitative investigation of Kelley's research, participants were allowed to add any further comments or information that they felt were relevant to the social support that they received while working on their dissertations. Several participants noted that family support added stress to the dissertation process. Although these were few, the predominant theme was that support from family and friends was beneficial to dissertation completion. Kelley's results did not provide detailed participant responses that would have been helpful to better understand the specific behaviors that determined whether participants rated their support system as helpful or stressful. Kelley's study was important because it

quantitatively established the factor of social support as having an influence on dissertation time to completion. One limitation of this study was that it did not measure any differences in the type of social support that doctoral students received.

Harsch (2008) conducted a quantitative study using counselor education participants to examine the role of self-efficacy, locus of control, and self-handicapping in dissertation completion. The 243 participants were divided into the 132 dissertation non-completers and the 111 dissertation completers. Family and friend support was a covariate in the study and an independent t-test was performed, which found no statistically significant differences between dissertation completers and non-completers on this item. Harsch also found that family and friend support was one statistically significant factor that accounted for the variance in time-to-degree completion. Harsch measured family and friend support using one item in the demographic questionnaire portion of the survey, which asked participants to rate the degree of emotional support that they received from family and friends during the dissertation stage. Dissertation self-efficacy (Varney 2003, 2010) was used as an independent variable and any potential effect or relationship between dissertation self-efficacy and family and friend support was not examined. The current study attempted to measure this relationship, which augmented the empirical examination of both dissertation self-efficacy and social support.

Breckner (2012) conducted a qualitative study of nine counselor education students who had withdrawn from their doctoral programs, and all participants reported that they had “strong relationships” (p. 58) with their friends and family. Breckner found

that participants received overwhelming support to withdraw because their friends and family were happy to see them more often after withdrawing. Participants' most frequently-given advice to incoming doctoral students was to find a support system and use it. These results may suggest that participants desired advice that would have allowed them to persist in their program but the support that family and friends offered to them was directed to the personal relationship and not toward doctoral program completion. Additional research studies are needed in order to better understand this potential nuance of social support. The current study provided data on current doctoral students who are persisting and the level of social support that they report from family, friends, and significant others.

Life Stressors

Scholars have identified the impact of doctoral studies and the dissertation process on the life stressors that doctoral students face. Research studies have found that students' physical and emotional health, in addition to their levels of stress, have been affected by the doctoral program experience (Breckner, 2012; Carlson et al., 2006; Cusworth, 2001; Flynn et al., 2012; Harsch, 2008; Protivnak & Foss, 2009; Willis & Carmichael, 2011). Two counselor education qualitative studies found life stressors as a salient theme (Breckner, 2012; Protivnak & Foss, 2009). The remaining research studies in this section found life stressors as a salient theme.

In their open-ended survey using a qualitative analysis design, Protivnak and Foss (2009) identified factors that positively and negatively affected the counselor education doctoral experience among 141 participants from CACREP programs. Personal issues

was one of the themes that the researchers identified from the participants' interviews, which included compromised personal health. Participants reported neglecting and postponing "critical" (p. 253) health care. Participants indicated that their doctoral experience was negatively affected when their health was compromised. The researchers also found that financial constraints contributed to participants feeling that they could not afford to get the health care that they needed. Both qualitative studies have found these two themes of adverse health outcomes and financial difficulties existed together, which suggests the need for further examination. The current study measured both life stressors and finances separately and quantitatively, which may increase the literature base on their relationship to dissertation self-efficacy. In Breckner's (2012) qualitative study of nine counselor education students who had voluntarily withdrawn from the same program, seven of the participants reported adverse physical and mental health events. Participants reported that they experienced negative physical health consequences because of their doctoral program experience, ranging from poor nutrition and weight gain to severe medical conditions that required hospitalization. Participants reported that the demands and requirements of the program and faculty led to these adverse health effects. Of the same nine participants, five of them also experienced mental health issues while they were still enrolled in their program. The negative mental health effects that they experienced included mild depression, long-term mental health counseling, post-traumatic stress as a result of one participant's meeting with the dissertation chair, and hospitalization.

Burkholder (2012) studied six counselor education doctoral students who had withdrawn for at least one semester and then successfully returned to their doctoral program. Results of the qualitative study found that 50% of the participants reported that negative physical and mental health issues contributed to their departure. These participants experienced “significant” (p. 15) physical pain and health challenges prior to their departure from their doctoral programs. One of the participants stated that poor physical health during the semester was the biggest factor in withdrawing from the program. Bridgmon (2007) used deductive interpretational analysis to create a list of the factors that the dissertation literature across disciplines identified as negatively influencing dissertation completion. Personal anxieties and hindrances, including health problems, was the top factor, although health was not frequently found in the comprehensive category of personal anxieties and hindrances.

Finances

Researchers have also concluded that finances and financial concerns are related to dissertation completion. In the only quantitative counselor education study on dissertation completion, Harsch (2008) measured the construct of financial security with 111 CACREP doctoral students who had completed their dissertations and 132 CACREP doctoral students who had not completed their dissertations. Using t-tests, no statistical differences were found between the two groups on the question of whether they felt financially secure during the dissertation process. Harsch found that through hierarchical regression analysis, financial security emerged as a variable that either increased or decreased the length of time to degree completion. Financial concerns were related to

delays in dissertation completion. Student classification data would have allowed researchers to determine whether the influence of finances differed significantly among doctoral students and candidates in the doctoral program.

Qualitative researchers have also identified finances as a factor in the dissertation experience and outcome. Flynn et al.'s (2012) inquiry of the counselor education dissertation process had mixed results. They found that participants who had financial limitations generally used it to motivate themselves to complete their dissertations. This result differs from the other studies where financial limitations have been viewed as detrimental to the dissertation experience and outcome. Cusworth (2001) had nine counseling doctoral participants in the qualitative study that identified funding as the most immediate concern among the participants, which caused them to look for other funding sources, to feel unsupported by their department, and to contemplate withdrawing from the program, which two participants did. Based upon their study of six late-stage counselor education doctoral student non-completers, Willis and Carmichael (2011) advised prospective doctoral students to find programs that will provide "adequate financial support during doctoral study" (p. 203). Carlson et al. (2006) wrote a conceptual article on the career development of counselor educators in training. They advised doctoral students to engage in appropriate financial planning before enrolling in a doctoral program in an effort to alleviate financial burdens and conflicts once enrolled in the program. Other counselor education research studies have also found that financial pressures influenced the dissertation and doctoral experience (Breckner, 2012; Flynn et al., 2012). Breckner concluded that financial difficulties influenced several participants to

withdraw from their program, which provides support for having included finances in the current study.

Another dimension of finances is the number of hours worked both at the university and outside of it. Two counselor education qualitative studies have identified work as influencing the doctoral and dissertation experiences of doctoral students (Flynn et al., 2012; Willis & Carmichael, 2011). Flynn et al. found that non-dissertation work that was necessary for financial support was a barrier to dissertation completion. The data analysis of the second counselor education study revealed that all five participants who had the negative experience of dropping out all had their “career as a refuge” (Willis & Carmichael, 2011, p. 198), which made it easier to drop out than to endure the difficulties of remaining in the doctoral program.

Procrastination

Procrastination and the dissertation process have been examined in counselor education and other academic disciplines. Within counselor education, the amount of research that has been conducted on procrastination and dissertation together is small (Harsch, 2008). Procrastination is an intrapersonal variable that has been examined in the context of dissertation completion and the dissertation process (Green, 1997; Harsch, 2008; Kelley, 2011). Procrastination can be defined as “the tendency to waste time, delay, and intentionally put off something that should be done” (Tuckman, 1991, p. 479).

In counselor education, Harsch (2008) conducted the only quantitative study that has examined procrastination by using a self-handicapping scale that included procrastination. One purpose of the study was to determine whether self-handicapping

scores were statistically different among the two groups of 111 dissertation completers and 132 dissertation non-completers in CACREP programs. Results of the study found that dissertation completers scored significantly lower on self-handicapping than dissertation non-completers and that procrastination could prevent doctoral students from completing their dissertations. Another result found that self-handicapping was not statistically significant in explaining the variance in time-to-degree completion between the two groups. Although this study was important, Harsch did not measure procrastination by itself as a self-handicapping variable, which precluded understanding its more precise role in dissertation time to completion between the two groups.

Green (1997) conducted a quantitative study on the psychosocial factors affecting dissertation completion by measuring procrastination and perfectionism using a sample of graduates and doctoral candidates in education. One purpose of the study was to examine any differences in procrastination between the dissertation completers and those who had not completed their dissertations. Results from the study found that procrastination predicted a delay in dissertation completion. In addition, Green concluded that those who procrastinated were more likely to endorse personal reasons rather than task difficulties when explaining the source of their procrastination. Those who procrastinated blamed themselves more than they blamed the dissertation or the program for their procrastination. One limitation of this study is that Green did not measure any other variables or covariates that may have explained the differences in procrastination scores between the two groups.

Kelley (2011) conceptualized procrastination as a form of self-regulation and examined the role of self-regulation in dissertation completion. Although procrastination was not a variable measured in the study, Kelley reviewed education and other non-counselor education literature related to procrastination and intrinsic interest. Kelley's literature review concluded that procrastination may be a significant factor influencing doctoral candidates who do not complete their dissertations because students lack having the structure of classes and assignment due dates, interest, and social support. This study was limited because it did not measure procrastination. The current study, however, sought to determine any relationship between procrastination and dissertation self-efficacy and add to the extant literature.

Summary

The research on the dissertation experience in counselor education has established an initial relationship between dissertation self-efficacy and dissertation completion results. The research findings to date clearly suggest that higher levels of dissertation self-efficacy have a positive relationship with dissertation completion (Colvin, 2012; Harsch, 2008; Varney, 2003, 2010). However, more research is needed on the factors that may affect dissertation self-efficacy. This chapter has explored the extant literature on the reasons why dissertation completion is important and the effects of dissertation non-completion. Next, models of doctoral student development were reviewed in order to provide a theoretical model which will serve as the basis for understanding the results and recommendations from the current study. Bandura's (1977) self-efficacy model was reviewed, followed by dissertation self-efficacy, which is the outcome measure in the

current study. The final portion of this literature review examined the personal and program factors that may contribute to dissertation self-efficacy from studies within counselor education and related fields.

CHAPTER III: METHODOLOGY

Introduction

The purpose of this study was to examine the relationship of program and personal factors to counselor education students' dissertation self-efficacy. Specifically, this study quantitatively examined whether the program factors of advisory relationship and program climate and the personal factors of social support, life stressors, finances, procrastination, and student classification could predict dissertation self-efficacy scores among counselor education doctoral students. This chapter presents the methodology and the following sections will describe the participants, procedures, instrumentation, research design, research question, and data analysis used in the study.

Participants

Participants in this study were adults 18 years of age and older who were currently enrolled in a CACREP-accredited counselor education program during the Spring, 2017 semester. On December 10, 2016, CACREP (www.cacrep.org/directory/) listed 73 doctoral programs in counselor education, which awarded either the Ph.D. or Ed.D. degree or both. Of the 73 CACREP-accredited doctoral programs, six offered the Ed.D. and Ph.D., 11 offered only an Ed.D., and 56 offered only a Ph.D. (www.cacrep.org/directory/).

Convenience sampling was used and the total population was unknown because the 73 CACREP did not report real-time doctoral program enrollment. For the 2015-2016 academic year, however, CACREP (2017) doctoral programs reported a total enrollment

of 2,668 students, of whom 76.13 % were female and 59.24% were Caucasian. During the same academic year, the 73 CACREP-accredited doctoral programs reported 428 total graduates.

In the current study, all currently-enrolled CACREP doctoral students and doctoral candidates, regardless of year of preparation or dissertation status, were eligible participants. A total of 159 participants completed the survey used to collect the data, of which two were incomplete and removed from analysis for a total of 157 participants ($N=157$). Participants represented all five ACES geographical regions (Association for Counselor Education and Supervision [ACES], 2017), and of those participants, 124 were female (79.0%) and 33 were male (21.0%). Participants reported the following race categories: 99 (63.0%) were White or Caucasian, 31 (19.7%) were African-American or Black, 12 (7.6%) were Asian-American or Asian, eight (5.1%) were Hispanic or Latino, five (3.2%) were multi-racial, and one (0.6%) each for Native American and other. Ten (6.4%) international students, 146 (93.0%) domestic students, and one (0.6%) who did not report student status participated in the study. For enrollment status, 125 (79.6%) were full-time students in their doctoral program, 31 (19.8%) were part-time students, and one (0.6%) did not report an enrollment status.

Procedures

The first procedural step in this study was completing the application and obtaining approval from the University of North Carolina at Charlotte's Institutional Review Board for Research with Human Subjects. After receiving approval, the second procedural step of recruiting participants began. The primary method for recruiting

participants was sending a personal email to each CACREP-accredited doctoral program contact listed on the online CACREP website (www.cacrep.org/directory/). Each of these program contacts received a personally-formatted email that requested all of their current doctoral students' participation in this study. The format of the recruitment email is contained in Appendix A. The recruitment email was sent twice during the data collection period, the second time in an attempt to increase participation. A request to participate in the current study (see Appendix B) was also posted twice on the COUNSGRADS listserv, which is a listserv of counseling graduate students in the United States. These requests for participation contained information that introduced the study, provided an electronic link to the online survey, and detailed the informed consent. Before participants could begin the survey, they had to provide their consent by clicking on a survey button indicating their consent. The Informed Consent Form (see Appendix C) stated that participation in the current study was voluntary, anonymous, and confidential. In addition, the Informed Consent Form notified participants that they could discontinue at any point in the study without penalty. By clicking the consent button, they acknowledged that they had met the study's criteria for participation. Participants could voluntarily enter a drawing for one of twenty-five \$20 Amazon.com gift cards if they provided their email address at the end of the survey, which was not linked to their responses when they provided their email address. Of the 157 study participants, 131 (83.4%) provided an email address and 26 (16.6%) did not provide an email address.

Once participants provided their consent, the Counselor Education Doctoral Student Dissertation Inventory Survey was made available to the participants (see

Appendix D). Completed survey responses were monitored daily, and because a higher response rate was needed after the initial requests were sent and posted, a second email request was sent to the CACREP doctoral program contacts and to the COUNSGRADS listserv. Two identical versions of the survey were created and were assigned a unique link so that data collected through the doctoral programs could be identified separately from the surveys that were completed through the COUNSGRADS listserv. Data from both sources were compared to one another, and because no significant differences were found, the data were combined for analysis. Data in this study were analyzed using the Statistical Package for Social Sciences (SPSS) version 23 application software.

Instrumentation

Three parts of the survey were used in the current study: (a) Recruitment email for participants, (b) Informed Consent Form, and (c) self-report survey, Counselor Education Doctoral Student Dissertation Inventory Survey. Each of these instruments will be described below.

Recruitment email (Appendix A and B). The Recruitment email was sent to the program contact of all 73 CACREP-accredited doctoral programs in the United States and posted to the listserv. The purpose of this email was to explain the purpose of the study, the estimated amount of time required for participants to complete the survey, and the potential benefits of their participation in the study. CACREP program contacts were asked to forward the email to all of their current doctoral students.

Informed consent (Appendix C). The Informed Consent Form was included with the Introductory email that was sent to the program contacts of all 73 CACREP-

accredited doctoral programs and posted to the COUNSGRADS listserv. Before participants could participate in the study, they were required to provide their consent by clicking the Accept button, which electronically acknowledged their consent. The purpose of the Informed Consent was to explain the purpose of the study, introduce the researcher, describe how they could participate, state the amount of time required to complete the survey, identify the risks, state that they were volunteers, explain confidentiality, provide contact information for the University's Research Compliance Office, and obtain their consent to participate. Participants who provided their consent were taken automatically to the Counselor Education Doctoral Student Dissertation Inventory Survey.

Counselor Education Doctoral Student Dissertation Inventory Survey (Appendix D). The Counselor Education Doctoral Student Dissertation Inventory Survey was a self-report survey comprised of five sections that were used together to collect data for the current study. The survey was created in the software application, SurveyShare and was used to collect all of the data for the study. The first section of the survey contained the demographic information items. The next four sections contained the four instruments that were used in this study, all of which had been empirically-validated and used in other published research studies. The researchers who constructed the Dissertation Self-Efficacy Scale (DSES; Varney, 2003), the Advisory Working Alliance Inventory (AWAI-S; Schlosser & Gelso, 2001), the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), and the Procrastination Scale (Tuckman, 1991) had all granted written permission for the use of their scales in the current study. The current

study's survey was piloted with four counselor education doctoral students and the mean completion time for all five sections was found to be ten minutes. In the following sections, each instrument used in the study will be reviewed.

Section 1: Demographic Information. The Demographics Survey asked participants to complete nine items, which were used to provide descriptive participant data. These items were ACES region of their doctoral program, anticipated graduation date, international student status, enrollment status (full-time or part-time), number of research courses completed, dissertation program progression, gender, marital status, and race. The purpose of these items was to provide descriptive participant information about variables that the literature had qualitatively identified as influencing the doctoral program and dissertation outcomes in counselor education programs.

Section 2: Dissertation Self-Efficacy Scale (Appendix E). The Dissertation Self-Efficacy Scale was used as the outcome measure, or dependent variable, in the current study. Varney (2003, 2010) hypothesized dissertation self-efficacy as a mediating variable between the three independent variables of: (a) being in a cohort, (b) mentoring, and (c) dissertation preparation experiences and the dependent variable of dissertation progress. Varney constructed the DSES based upon guidelines that were specifically recommended for self-efficacy measures (Bandura, 1997, 2005; Pajares, 1997). Items on the scale were scored from 0 ("Cannot do") through 50 ("Moderately can do") to 100 ("Certain can do") using 10-point intervals, based upon the scale-construct research of Bandura (2005) and Pajares. They also recommended that self-efficacy scales be constructed using the phrase "can do" because participants are rating the strength of their

belief in the ability to perform the items, which are required tasks. The level of dissertation self-efficacy was calculated by computing the mean score for the 16 scale items and multiplying by 16. When a participant omitted one of the 16 items, the mean score automatically adjusted for this missing data. Total scale scores from 0 to 528 indicated a low level of dissertation self-efficacy, scores from 544 to 1072 indicated a moderate level of dissertation self-efficacy, and scores from 1088 to 1600 indicated a high level of dissertation self-efficacy (Harsch, 2008). The total DSES scale score was used in the data analysis.

Varney (2003, 2010) constructed the DSES according to the following six self-efficacy scale construction guidelines (Bandura, 1997, 2005; Pajares, 1997): (a) scale items need to assess self-efficacy with specificity and correspondence, (b) scale items need to represent gradations or levels of task demands, (c) item phrasing needs to be clear, unambiguous, and succinct, (d) the response scale needs to allow for sufficient discrimination among the scale items and individuals, (e) the scale length needs to be appropriate, and (f) the scale must minimize response biases. Because self-efficacy constructs are most effective when they are specific to task contexts (Bandura, 1997, 2005), Varney constructed the DSES instead of using an available generic academic or research self-efficacy measure.

In order to establish construct validity, Varney (2003, 2010) provided the following six steps as evidence for the 16 items measuring dissertation self-efficacy: (a) scale construction was based upon an extensive theoretical and empirical literature base, (b) experts reviewed the initial scale for face and content validity, scale clarity, and

response format and scale revisions were made based upon the experts' feedback, (c) an item and factor analysis were conducted to obtain validity and reliability data with a pilot group, (d) internal consistency reliability for the pilot was very high ($\alpha = .94$), which suggested that scale items were clear and unambiguous, (e) exploratory and confirmatory factor analyses suggested one common factor, dissertation self-efficacy, instead of a three- or four-factor model, and (f) the scale appeared to accurately and reliably measure dissertation self-efficacy. Increased evidence for the scale's construct validity occurred when the predicted effects of those who demonstrated the highest levels of dissertation self-efficacy also demonstrated the most dissertation progress (Bandura, 2005; Varney, 2003, 2010).

Varney's (2003, 2010) Dissertation Self-Efficacy was first used in a sample of 51 education doctoral students in two cohorts. In this study, the internal consistency reliability was again very high ($\alpha = .97$). The results of the correlational analysis showed a statistically significant positive relationship between dissertation self-efficacy and dissertation progress, finding that participants with the highest DSES scores made the most dissertation progress. This result again provided evidence for the scale's construct validity. To further examine the scales' underlying factor structure, Varney conducted an exploratory factor analysis on the DSES scale scores using principal components analysis. Results of the analysis indicated that one factor explained 71% of the variance, which suggested strong evidence of construct validity and that dissertation self-efficacy can be measured by the DSES.

In addition to Varney's (2003, 2010) research study, the DSES has been used in two other empirical research studies. In counselor education research, Harsch (2008) examined the role of self-efficacy, locus of control, and self-handicapping in dissertation completion. The 243 participants were divided into 132 dissertation non-completers and 111 dissertation completers and all participants were administered the DSES. Results of the study indicated that the internal consistency reliability of the DSES was very high ($\alpha = .90$) and that the one-factor loading on dissertation self-efficacy was confirmed. Colvin (2012) conducted the second empirical research study using the DSES with 445 participants from 92 different academic majors and 46 universities in order to explore socialization variables and educational psychological variables, including dissertation self-efficacy, in relation to dissertation progress. Participants were divided into two groups; one group contained 236 doctoral candidates and the second group contained 209 doctoral program graduates, and all participants were administered the DSES. Results of the study indicated that the internal consistency reliability of the DSES was very high ($\alpha = .94$).

Section 3: Advisory Working Alliance Inventory (Appendix F). The advisory relationship is a program factor and was one of the independent, predictor variables used in the current study. Schlosser and Gelso (2001) conducted research in order to define the advising relationship and to establish a reliable and valid measure of the advising process. They constructed and validated the Advisory Working Alliance Inventory to measure the graduate advising relationship from the graduate student's perspective. It is a brief, self-report, 30-item measure of the perceptions of the working alliance between advisees and

their graduate advisor from the advisees' perspective. The mean scale score was used in the data analysis in order to account for any missing values. The researchers defined the term advisor as the "faculty member who has the greatest responsibility for guiding the advisee through the graduate program" (p. 158), and encompasses the roles of major professor, committee chair, and dissertation chair, which were stated on the instrument. This more inclusive definition of advisor is of critical importance to the current study because eligible participants included all currently-enrolled doctoral students, some of whom had a dissertation chair and some of whom had not yet entered the dissertation stage.

Schlosser and Gelso (2001) constructed the AWAI scale by taking items from the Supervisory Working Alliance Inventory (Efstation, Patton, & Kardash, 1990) and the Research Training Environment Scale – Revised (Gelso, Mallinckrodt, & Judge, 1996) that were applicable to graduate school advising. The researchers also added nine additional items from their research that were thought to measure the advisory working alliance construct. After receiving feedback from content experts, the researchers updated their item pool and then interviewed a panel of six counseling psychology faculty members in order to obtain a more diverse perspective on advising relationships. Following the interviews, the researchers submitted their instrument for content analysis to a panel of experienced researchers and changes were made to some of the items. In order to validate the scale, 281 counseling psychology doctoral students participated in the first study which extracted three factors as a result of conducting a factor analysis. The AWAI demonstrated very good internal consistency reliability because the three

subscales correlated highly with the AWAI total score ($r_s = .86$, $r_s = .88$, $r_s = .90$) and moderately highly with each other ($r_s = .62$, $r_s = .66$, $r_s = .72$). The AWAI's scale validity was supported by positive correlations between itself and the other measures used in its validation, including the advisee's research self-efficacy ($r = .32$, $p < .001$) and satisfaction with advising. In order to further evaluate the AWAI's internal consistency reliability, the researchers conducted a second study with 41 doctoral students in counseling and clinical psychology over a two-week interval. Results of the study indicated that both the internal consistency and test-retest reliability over a two-week period were satisfactory. Subsequent research studies with counseling psychology graduate students have provided substantial support for the psychometric integrity of the AWAI, with the coefficient alpha ranging from a low of .84 to three studies of .95 (Rice et al., 2009; Schlosser & Kahn, 2007; Wei, Tsai, Chao, Du, & Lin, 2012).

The AWAI (Schlosser & Gelso, 2001) is comprised of three subscales: Rapport, Identification, and Task Focus. Rapport refers to the part of the advising relationship that reflects the advisor's support and encouragement of the advisee, as well as the emotional bond between the two that results from their work together. Identification refers to the part of the advising relationship that reflects the degree to which the advisee wants to become like the advisor, as well as the advisee's admiration of the advisor. Task Focus refers to the part of the advising relationship where advisors promote the advisees' understanding of the tasks, goals, and process of graduate school, as well as how well they stay focused on tasks. Importantly, Task Focus is hypothesized to measure what advisors teach their advisees about research, professional development, and how to

handle problems. Construct validity estimates for the three subscales range from .86 to .90, which is considered strong.

The AWAI is a 30-item instrument and all items in the current study were rated using a 5-point Likert scale, with a 1 indicating strongly disagree to a 5 indicating strongly agree. Higher total scale scores indicated that the advisee felt more advisor support and encouragement, a greater desire to become more like the advisor, and more understanding of the tasks, goals, and processes of graduate school. Many of the counselor education research studies and conceptual articles that have examined the doctoral program experience, dissertation experience, and dissertation outcomes have found the advisor and the advisory relationship to be salient (Bridgmon, 2007; Briggs & Pehrsson, 2008; Burkholder, 2012; Casto et al., 2005; Del Rio & Mieling, 2012; Ferrell, 2007; Flynn et al., 2012; Harsch, 2008; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009; Willis & Carmichael, 2011). Because of this, the AWAI was used in the current study because of its validity, reliability, and use in counseling psychology research (Schlosser & Gelso, 2005; Schlosser & Kahn, 2007; Schlosser et al., 2011). The AWAI was an appropriate instrument to be used in this study.

Section 4: Multidimensional Scale of Perceived Social Support (Appendix G).

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is a brief, 12-item self-report instrument that distinguishes support from three sources, which are the three subscales: (a) Significant Other Subscale, (b) Family Subscale, and (c) Friends Subscale. Each subscale contains four items and all items are rated using a 7-point Likert scale, with a 1 indicating very strongly disagree to a 7 that indicates very

strongly agree. The mean MSPSS scale score was used in the data analysis. Higher total scale scores indicated higher levels of perceived support for each of the three subscales. Social support was considered a personal factor, and was used as an independent, predictor variable in the current study.

The MSPSS (Zimet et al., 1988) was designed to address social support adequacy and the perceptions of social support from three specific sources: (a) significant other, (b) family, and (c) friends. In order to construct and validate the scale, Zimet et al. created several versions of the scale, conducted pilot studies, and then subsequently revised the scale, which resulted in the current 12-item scale. Repeated factor analyses reduced the number of items from the original 24 to the current 12 items and also grouped the sources of support into the three current sources of significant other, family, and friends.

The MSPSS's construct validity was addressed by investigating the relationship between the scale's items of perceived social support and symptoms of anxiety and depression. The researchers hypothesized that high levels of perceived social support would be associated with low levels of depression and anxiety symptoms. The MSPSS scale validation used 275 participants who were undergraduates enrolled in a psychology course from one university. Results from the study suggested that the MSPSS was psychometrically sound as evidenced by good reliability, factorial validity, and adequate construct validity. Internal consistency reliability for the total score was .88, and the Cronbach's coefficient alpha was .91 for the Significant Other Subscale, .87 for the Family Subscale, and .85 for the Friends Subscale, all of which were considered to demonstrate good internal consistency. Test-retest reliability for 69 of the 275

participants using a two- to three-month interval was measured at .85 for the entire MSPSS scale and .72, .75, and .85 for the three subscales, which indicated adequate stability over the time period. Scale validity was assessed by testing the hypothesis that perceived social support would be negatively related to depression and anxiety symptoms. Results of the validity testing indicated that the correlations between the MSPSS subscales and the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) were significant and negative at low levels, which indicated moderate construct validity evidence.

Since its original construction and validation, Zimet, Powell, Farley, Werkman, and Berkoff (1990) conducted a study to extend the initial MSPSS psychometric findings by examining its internal reliability, factorial validity, and subscale validity by using three different groups. After administering the MSPSS separately to 265 pregnant women, 74 adolescents, and 55 pediatric residents, Zimet et al. found that: (a) the three factor structure and subscales were confirmed as demonstrated by strong factorial validity, (b) internal consistency reliability was slightly higher for each scale and the instrument as a whole than the original study (Zimet et al., 1988), and (c) strong support was found for the subscales. A second confirmation study was conducted with a diverse group of 154 students at an urban college (Dahlem, Zimet, & Walker, 1991). The researchers conducted a principal components analysis in order to examine factorial validity and they found that the items loaded very strongly on their designated subscales with minimal cross-loading, which is considered very strong. Internal consistency

reliability was .91 for the total scale and subscale values were .90, .94, and .95 for the Family, Friends, and Significant Other subscales, respectively.

The MSPSS (Zimet et al., 1988) had been used in 44 research studies with diverse populations from 1988 through 2015 (G. Zimet, personal correspondence, October 12, 2016). Its psychometric properties had been reported in these studies and the results were consistent with the results from the psychometric examination of the MSPSS in the research studies reviewed in this section (Dahlem et al., 1991; Zimet et al., 1988; Zimet et al., 1990). In addition, the MSPSS had been translated into more than ten languages and its psychometric properties were examined and found to be consistent with the original MSPSS findings on reliability, validity, and factor structure. Because of these properties, the MSPSS was used in the current study to examine the relationship of support to the outcome measure of dissertation self-efficacy.

Section 5: Procrastination (Appendix H). Procrastination is a personal factor and was measured in the current study using the Procrastination Scale (Tuckman, 1991). The Procrastination Scale is a brief, 16-item self-report scale with a mean score of 40 and the range of scores is between 16 and 64, with smaller scores indicating a greater tendency to procrastinate. The total Procrastination Scale score was used in the data analysis. The four response choices per item are “That’s me for sure, That’s my tendency, That’s not my tendency,” and “That’s not me for sure.” Tuckman developed this self-report measure of procrastination tendencies and then investigated its concurrent validity.

The original Procrastination Scale (Tuckman, 1991) was developed with 72 statements covering three areas: (a) a general tendency to delay or put off doing tasks, (b)

a tendency to experience difficulty doing unpleasant tasks and working to avoid the unpleasantness, and (c) a tendency to blame others for one's own plight. The scale was given to 50 college juniors and seniors and the results were analyzed using a factor analysis and principal component solution, which reduced the number of items to 35 with a resulting reliability of .90. The scale was subsequently administered to 183 new participants and the resulting scale scores were analyzed again using a factor analysis. The second analysis yielded a much better one-factor solution with the 183 participants than the two-factor solution yielded from the results of the original 50 participants. Results of this second analysis showed that of the 35 items, 16 had loadings of .40 or higher on the single factor, which resulted in a new 16-item scale with a reliability of .86, which is considered high. Tuckman assessed scale content validity by finding that the Procrastination Scale score was significantly related to a behavioral measure of self-regulated performance, called the Voluntary Homework System (Tuckman, 1990). With these findings, Tuckman (1991) concluded that the Procrastination Scale provided a valid and reliable estimate of the tendency to waste time, delay, and put off tasks that should be done, which could predict an inclination to procrastinate. Although Tuckman (1991) reported a reliability estimate of .90 in his original scale construction and validation, Tuckman also conducted subsequent studies and reported reliability estimates of .89 (Tuckman, 1998) and .92 (Tuckman, 2005) using different participant samples. The 16-item Procrastination Scale (Tuckman, 1991) was also used as a benchmark to assess convergent validity with a new academic procrastination scale (Yockey, 2016). The 16-

item Procrastination Scale was the version that was used in the current study to measure participants' procrastination.

Program climate is a program factor and was measured in the current study using five items from the counselor education program climate literature. The five questions were: (1) faculty respect me as a female, male, or transgender person, (b) doctoral student opinions are valued by the faculty, (c) I feel supported by faculty in my counseling theoretical orientation, (d) the program supports my career goal of becoming an educator or becoming a practitioner or supervisor, and (e) my cultural heritage and how these views inform my understanding are valued by the faculty. The program climate items were reviewed using a talk-aloud with four counselor education doctoral students and found to be clear and self-explanatory. In addition, two counselor education faculty provided a content validity review of the items and their recommendations were implemented. The purpose of including program climate in the current study was to examine its relationship to dissertation self-efficacy.

Life stressors, a personal factor, was measured in the current study by using items that have been identified in the counselor education literature. In their qualitative studies, Breckner (2012), Bridgmon (2007), Burkholder (2012), Flynn et al., (2012), and Protivnak and Foss (2009) identified the life stressors that had an effect on the dissertation experience of students:(a) death of a family member or close friend, (b) serious illness, (c) interpersonal breakup, (d) birth of a child, and (e) seriously ill family member. In the current study, participants were instructed to check if any of the five stressful life events had occurred during their doctoral program, and if they indicated that

one or more of these stressors had occurred, then they were scored as having life stressors. If participants indicated that none of the stressful life events had occurred, then the participant was scored as having no life stressors. Life stressors was used as a dichotomous variable in the current study. The life stressor items were reviewed using a talk-aloud with four counselor education doctoral students, who found the items to be clear and self-explanatory. In addition, counselor education faculty provided a content validity review of the items and their recommendations were implemented. The purpose of including life stressors in the current study was to examine its relationship to dissertation self-efficacy.

Finances are a personal factor which was measured in the current study using items from the counselor education literature. In their research studies, the Council of Graduate Schools (2010) Harsch (2007), Breckner (2012), Bridgmon (2007), Burkholder (2012), Flynn et al., (2012), and Protivnak and Foss (2009) found that finances had an effect on dissertation experience and outcome. In order to measure finances in the current study, the following sources of funding were listed from prior researchers: (a) graduate assistantship, (b) student loan, (c) scholarship or stipend, (d) employer financial support, and (e) Veterans educational benefits. In the current study, participants were instructed to check if they received financial support from any of the five sources, and if they indicated support from one or more of these sources, then they were scored as having financial support. If participants checked none of the sources of support, then the participant was scored as having no financial support. After the data were collected and reviewed, participants were categorized in a dichotomous method as either having either having

received financial support of any kind or not. The finance items were reviewed using a same talk-aloud with four counselor education doctoral students who found the items to be clear and self-explanatory. In addition, counselor education faculty provided a content validity review of the items and their recommendations were implemented. The purpose of including the personal factor of finances in the current study was to examine its relationship to dissertation self-efficacy.

Student classification was used as a dichotomous item which functioned as an independent, predictor variable in the current study to determine its relationship to dissertation self-efficacy. On the survey, participants who indicated that they had not completed their comprehensive examination were coded as a doctoral student, and participants who indicated that they had completed their comprehensive examination were coded as a doctoral candidate. This distinction between doctoral students and candidates followed the traditional doctoral program model.

Research Design

The current study employed a non-experimental, descriptive correlational design using a survey administered to CACREP-accredited doctoral students through convenience sampling. This research design was selected so that the study's variables could be examined in their natural states without manipulation at one point in time. This study's descriptive research provided data for initial investigations into counselor education students' dissertation self-efficacy by asking questions about the participants and reporting the results. The understanding of dissertation self-efficacy and the factors that may affect it were still in the initial phase at the beginning of this study. A

correlational research design attempts to determine whether, and to what degree and direction, a relationship exists between two or more variables (Fraenkel et al., 2011). A correlational research design was selected for the current study because one purpose of the study was to determine whether a relationship existed between the program factors, personal factors, and dissertation self-efficacy in counselor education doctoral students. Program factors and personal factors were the study's independent, predictor variables and dissertation self-efficacy was the outcome or dependent variable. These variables were operationalized as continuous variables, which allowed the degree, direction, and magnitude among them to be measured.

The current study's design facilitated exploring the relationship between the independent variables (advisory relationship, program climate, social support, life stressors, finances, procrastination, and student classification) and the dependent variable (dissertation self-efficacy) with the demographic variables. The demographic variables were used to provide descriptive data about the participants.

Research Question

The research question for this study was as follows:

1. Is there a statistically significant relationship between counselor education doctoral students' advising relationship, program climate, social support, life stressors, finances, procrastination, and student classification and dissertation self-efficacy?

Data Analysis

Participants' responses to the Counselor Education Doctoral Student Dissertation Inventory were collected in the Surveyshare application software product, downloaded and combined into Microsoft Excel, and then analyzed using the SPSS software package. Responses were retrieved from each version of the survey (CACREP program and listserv) and then combined into a Microsoft Excel spreadsheet. The following independent variables were captured on participants' surveys and used in the study: (a) advisory alliance, (b) program climate, (c) social support, (d) life stressors, (e) finances, (f) procrastination, and (g) student classification. Dissertation self-efficacy was the dependent variable, and demographic variables were used to describe the participants.

Before the major analysis began, data were first analyzed to determine whether the data from both the CACREP program responses and the listserv responses were statistically different. No statistically significant differences were found. The next step was to assess the fit between the distribution of the variables and the assumptions of the statistical analyses, including outliers, normality, homogeneity of variance, linearity, and multicollinearity (Lambie, Smith, & Ieva, 2009; Tabachnick & Fidell, 2013). Results of the analysis indicated that the data met these assumptions.

Research Question 1: Is there a statistically significant relationship between counselor education doctoral students' advising relationship, program climate, social support, life stressors, finances, procrastination, and student classification and dissertation self-efficacy? The major statistical analysis for this question utilized a multiple linear regression in order to determine whether a significant relationship existed

between the independent, predictor variables (program and personal factors) and the dependent variable, dissertation self-efficacy. The multiple regression analysis allowed the researcher to control for independent variables that are included in the regression in order to determine the relative impact of each independent variable on the dependent variable simultaneously (Tabachnick & Fidell, 2013). Because this was an initial study of program and personal factors, a multiple regression was used to examine the data in order to determine the contribution that each independent (predictor) variable made to the overall prediction of dissertation self-efficacy. The Pearson correlation coefficient is a test statistic that measures the strength of the relationship between two continuous variables, and it was used in the current study to determine whether a significant correlation existed among the variables. Internal consistency reliability was computed on each of the scales used in the study in order to determine whether the items in each scale or subscale reliably measured the same latent variable. The corresponding Cronbach's alpha statistic has been reported.

Summary

This chapter described the research methodology that was used in the current study in order to determine whether any significant relationships existed among the advisor-advisee working alliance, program climate, social support, life stressors, finances, procrastination, student classification, and dissertation self-efficacy. Within this chapter, the participants, procedures, instrumentation, research design, research questions, and data analysis approach were explained for the current study. The following chapter will

present this study's results based upon the statistical analyses and methodology presented in this chapter.

CHAPTER IV: RESULTS

Introduction

The purpose of this study was to examine the relationship of program and personal factors to counselor education students' dissertation self-efficacy. Specifically, this study quantitatively examined whether the program factors of advisory relationship and program climate and the personal factors of social support, life stressors, finances, procrastination, and student classification could predict dissertation self-efficacy scores among counselor education doctoral students. The research question for this study was as follows: Is there a statistically significant relationship between dissertation self-efficacy and the following independent variables: (a) advisory relationship, (b) program climate, (c) social support, (d) life stressors, (e) finances, (f) procrastination, and (g) student classification?

This chapter provides the results of the current study. Specifically, the first section describes the participants in this research study. The second section addresses the results and findings from the data analysis. The third and final section provides an overall summary.

Description of Participants

Eligible participants for the current study were CACREP doctoral students currently enrolled as either full-time or part-time students at any point in their doctoral studies. An email request to participate in a survey was sent to all 73 of the doctoral program contacts at CACREP (2016) programs and also posted to the COUNSGRADS listserv. A total of 159 responses were received, with 152 resulting from the program

chair's email and seven from the listserv request. Of the 159 responses that were submitted, 157 ($N=157$) were complete and used in the analysis. The most recent CACREP (2017) program doctoral program enrollment data showed that 2,668 students were enrolled and 428 graduated during the period from Summer, 2015 through the Spring, 2016 term. The convenience sample used in the current study represented approximately 6% of the established CACREP-accredited doctoral students in the United States. Using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) with a sample size of 157 ($N=157$) and a power of .99, the result suggested that the sample size was adequate in order to achieve a high level of power and reduce the chance of making a Type II error. The effect size f^2 was .40, which is considered large.

In order to better understand the study's participants, the following demographic variables were captured: (a) gender, (b) race, (c) marital status, (d) enrollment status, (e) international student status, (f) student classification, and (g) ACES region of participant's doctoral program. Frequencies and percentages of the demographic variables used in this study are contained in Table 2.

Among the survey's 157 participants, 79.0% ($n=124$) were female and 21.0% ($n=33$) were male. For race, 99 (63.0%) identified as Caucasian or White, 31 (19.7%) as African-American or Black, 12 (7.6%) as Asian-American or Asian, eight (5.1%) as Hispanic or Latino, five (3.2%) as multiracial, and one (0.6%) for each of the following: (a) Native American or Alaskan Native, and (b) other. Overall, the current study's participants closely approximated the demographic data that CACREP (2017) reported, although the current sample was not randomly selected. CACREP reported the following

gender data for CACREP doctoral students: 76.13% of CACREP students identified as female, and 23.87% identified as male. CACREP also reported the following demographic data for all master's and doctoral students combined: (a) 59.24% identified as Caucasian, 19.56% as African-American, 8.68% as Hispanic / Latino, 2.07% as multiracial, 1.96% as Asian-American, and 0.72% as Native American / Alaska Native. CACREP did not report non-gender demographic data for doctoral programs only.

Of the 157 participants who provided a marital status, 72 were married (45.9%), 70 were single (44.6%), nine were divorced (5.7%), and six (3.8%) were engaged. While one participant did not respond (0.6%), 146 (93.0%) were domestic students and 10 (6.4%) were international students. For enrollment status, 125 (79.6%) were enrolled full-time, 31 (19.8%) were enrolled part-time in their doctoral programs, and one (0.6%) participant did not provide an enrollment status.

Participants reported the following student classification data: (a) 77 were doctoral students, and (b) 80 were doctoral candidates. Participants who indicated that they had not completed their comprehensive examination were coded as doctoral student. Participants who indicated on their survey that they had completed their comprehensive examination were coded as doctoral candidate.

Participants reported the following ACES region for their program: (a) North Central (NCACES) at 23%, (b) North Atlantic (NARACES) at 14%, (c) Southern (SACES) at 55%, (d) Rocky Mountain (RACES) at 6%, and (e) Western (WACES) at 2%. Of the 73 CACREP-accredited programs that existed at the time that data collection began (CACREP, 2016), 20 programs (27%) were located in the North Central

(NCACES) region, five programs (7%) were in the North Atlantic (NARACES) region, 39 programs (53%) were in the Southern (SACES) region, seven programs (10%) were in the Rocky Mountain (RACES) region, and two programs (3%) were in the Western (WACES) region. When comparing the percentages of participants' reported CACREP (2017) region to the percentage of programs by region, the percentages approximate one another. The distribution of participants by the ACES region in which their program was located can also be found in Table 1. A summary of the current study's demographic data indicated that the reported CACREP (2016, 2017) demographic characteristics closely matched the study's demographic characteristics, although the sample was not randomly selected.

Table 1. *Frequencies for Descriptive Variables Included in the Study*

| Variable | Frequency | Percent |
|---------------------------------|-----------|---------|
| Gender | | |
| Female | 124 | 79.0 |
| Male | 33 | 21.0 |
| Total | 157 | 100.0 |
| Race | | |
| African-American / Black | 31 | 19.7 |
| Asian-American / Asian | 12 | 7.5 |
| Caucasian / White | 99 | 63.1 |
| Hispanic / Latino | 8 | 5.1 |
| Native American / Alaska Native | 1 | .6 |
| Multiracial | 5 | 3.2 |
| Other | 1 | .6 |
| Total | 157 | 100.0 |
| Marital Status | | |
| Single | 70 | 45.9 |
| Divorced | 9 | 5.7 |
| Married | 72 | 44.6 |
| Engaged | 6 | 3.8 |
| Total | 157 | 100.0 |

Table 1, continued

| | | |
|---|------------|--------------|
| <i>International Student Status</i> | | |
| International Student | 10 | 6.4 |
| Domestic Student | 146 | 93.0 |
| Missing | 1 | 0.6 |
| Total | 157 | 100.0 |
| <i>Enrollment Status</i> | | |
| Full-time | 125 | 79.6 |
| Part-time | 31 | 19.8 |
| Missing | 1 | 0.6 |
| Total | 157 | 100.0 |
| <i>Student Classification</i> | | |
| Doctoral Student | 77 | 49.0 |
| Doctoral Candidate | 80 | 51.0 |
| Total | 157 | 100.0 |
| <i>Life Stressors</i> | | |
| No Life Stressors | 54 | 34.4 |
| One or More Life Stressors | 103 | 65.6 |
| Total | 157 | 100.0 |
| <i>Finances</i> | | |
| No Financial Assistance Received | 11 | 7.0 |
| One or More Forms of Financial Assistance | 146 | 93.0 |
| Total | 157 | 100.0 |
| <i>ACES Region*</i> | | |
| North Central (NCACES) | 36 | 23.0 |
| North Atlantic (NARACES) | 22 | 14.0 |
| Southern (SACES) | 87 | 55.0 |
| Rocky Mountain (RACES) | 9 | 6.0 |
| Western (WACES) | 3 | 2.0 |
| Total | 157 | 100.0 |

*Geographic region in which CACREP doctoral program located

Data Screening

Before the major analysis was run, the data were screened for accuracy and for assumptions testing. The variables used in the study were considered missing in a

completely random manner because Little's Missing Completely at Random (MCAR) test was not statistically significant ($p > .89$). In addition, the univariate analysis showed that all variables with a missing value were less than 2% of the total. Because of this finding, multiple imputation was not used. Data screening and an examination of the assumptions necessary to run a multiple linear regression were conducted and included: (a) normality, (b) linear relationship between the predictor and outcome variables, (c) homoscedasticity, (d) potential multivariate outliers, (e) multicollinearity, and (f) independence of residuals. All of the assumptions have been assessed and found to be tenable, as described in the following paragraphs.

Normality was assessed using multiple statistics. Although the Kolmogorov-Smirnov test of the outcome variable was significant, $D(157) = .959$, $p < .05$, an examination of the skewness and kurtosis values provided support that the dissertation self-efficacy scores were reasonably normally distributed. The skewness value of $-.716$ and the kurtosis value of $.316$ fell well within the desired -2 to $+2$ range for these values in reasonably normally distributed data. The independent variables were also assessed for normality and were found to be normally distributed. No data transformation was needed for any of the variables.

The assumption that a linear relationship existed between the predictor and outcome variables was assessed by examining the Normal Probability-Probability Plot of Regression Standardized Residuals (see Appendix I). Although some points slightly deviated from the regression line, the points generally appeared to follow the line. The linear relationship assumption has been met for this study. An examination of the

scatterplot in Appendix I showed that the residuals were approximately equal for all of the predicted values of the dissertation self-efficacy scores, which satisfied the homoscedasticity assumption. In assessing for outliers, the scatterplot also showed that no points fell outside of -3 or +3 on either the x- or y-axis. A review of the standard residuals revealed that the range was from -2.799 to 2.350, which was within the desired range of -3.0 to + 3.0 (see Appendix J). The Cook's Distance statistic had a minimum value of 0 and a maximum value of .149, which was less than 1 and within the desirable range.

In order to test the assumptions of multicollinearity, correlations among the study's variables were computed (see Appendix K). All of the correlations among the predictor variables were less than .5, which was desirable. A tolerance and Variance Inflation Factor (VIF) was calculated for each predictor variable as another assessment of multicollinearity. Values for tolerance ranged from .794 to .954 for all seven predictors, and the VIF statistic ranged from 1.066 to 1.289 (see Table 5). Because the tolerance values were greater than .2 (Menard, 1995) and the VIF values were less than 10 (Myers, 1990), they provided additional support that no multicollinearity existed among the predictor variables.

The final assumption to address before beginning the major analysis was independence of residuals. In order to evaluate the assumption that no correlation existed between the residuals, the Durbin – Watson test was run. Results of the test indicated that the statistic was 2.128. This result indicated that there was essentially no correlation among the residuals (Mayers, 2013), which was considered excellent.

Variable Definitions

Table 2 below contains the variables, variable type, variable definition, and how the variable was measured in the multiple linear regression.

Table 2. *Variable, Type, Definition, and Measurement*

| Variable | Type | Definition | Measurement |
|----------------------------|------|---|--|
| Dissertation self-efficacy | DV | Belief in the ability to complete dissertation tasks | 16-item scale; total score used in analysis |
| Advisory relationship | IV | Advisor-advisee working alliance, which is the portion of the relationship between the doctoral student (advisee) and the advisor that reflects the connection between the two of them that is made while working toward common goals | 30-item scale; total score used in analysis |
| Program climate | IV | The interaction between the student and elements of the doctoral program, including academics, department culture, program-student match, and cultural understanding | 5-item scale; total score used in analysis |
| Social Support | IV | Social support adequacy and perceptions of social support from family, friends, and significant other | 12-item scale; total score used in analysis |
| Life Stressors | IV | Personal experiences of illness, family illness, death of a family member, friend, or significant person, interpersonal breakup, and birth of a child during the doctoral program | Checklist of five yes or no items; dichotomous |
| Finances | IV | Type of financial assistance received during doctoral program | Checklist of five types of assistance; dichotomous |
| Procrastination | IV | Tendency to put off doing a task under one's control unnecessarily until a future date | 16-item scale; total score used in analysis |

Table 2,
continued

| | | | |
|--------------------------------|----|---|--|
| Student Classifica- tion | IV | Completed comprehensive examination or not? | Dichoto- mous; doctoral student or candidate |
|--------------------------------|----|---|--|

DV = dependent variable or outcome variable; IV = independent variable or predictor

Descriptive Statistics

For each of the major scales used in this study, descriptive statistics were compiled. The number of scale items, the mean, standard deviation (SD), minimum value, and maximum value are contained in Table 3 for the major scales used. Total scale scores were used in the major analysis.

Table 3. *Descriptive Statistics*

| Scale/Subscale | No. Scale | | | | |
|-----------------------------------|-----------|---------|--------|-----|------|
| | Items | Mean | SD | Min | Max |
| Dissertation Self-Efficacy (DSES) | 16 | 1135.88 | 285.61 | 250 | 1590 |
| AWAI-S (Advisory relationship) | 30 | 118.84 | 22.67 | 43 | 150 |
| MSPSS (Social support) | 12 | 68.92 | 13.38 | 30 | 84 |
| Procrastination | 16 | 44.99 | 8.29 | 22 | 64 |
| Program Climate | 5 | 20.12 | 4.70 | 5 | 25 |

Reliability Data

Reliability coefficients were computed on all of the instruments using Cronbach's alpha as a test of internal consistency. The outcome variable (DSES) and three of the predictor variables were measured with instruments that have been used in multiple prior research studies. One new scale was used in the current study to measure program climate. The reliability coefficients computed in the current study were consistent with or exceeded the reliability data published in prior research studies. See Table 4 for the

reliability coefficients for each of the instruments used in the current study. Reliability statistics are presented for each overall scale. The reliability of all the scales used in this study was considered excellent because the Cronbach's Alpha was .90 or greater for each scale.

Table 4. *Reliability Statistics*

| Scale/Subscale | Cronbach's Alpha (α) |
|---|-------------------------------|
| Dissertation Self-Efficacy ($N= 156$, items = 16) | .950 |
| AWAI-S ($N=139$, items = 30) | .958 |
| MSPSS ($N=154$, items = 12) | .919 |
| Procrastination ($N=147$, items = 16) | .907 |
| Program Climate ($N=156$, items = 5) | .908 |

Results and Findings

The following section reviews the results of the data analysis for the research question used to guide this study. Multiple linear regression was used as the statistical analysis because it can determine the extent to which a linear relationship exists between the predictor variables (program and personal factors) and the outcome variable (dissertation self-efficacy) in counselor education doctoral students. A multiple linear regression method was selected to predict the dissertation self-efficacy score based upon the values of the program and personal factor scores. In addition, the personal and program factors used in the multiple regression can be controlled, which means that the individual significance of each factor can be determined when they are included together in the model of prediction.

To predict dissertation self-efficacy scores, the major analysis for this study was a multiple linear regression. The seven predictor variables: (1) advisory relationship, (2)

program climate, (3) social support, (4) life stressors, (5) finances, (6) procrastination, and (7) student classification were loaded into the model using the Enter method. Results of the analysis indicated that a significant model emerged: $F(7,149) = 8.48, p < .001$. The model explained 25.1% of the variance in dissertation self-efficacy scores. Table 5 provides information about the regression coefficients entered into the model. Three of the predictors significantly contributed to the model. A strong advisory relationship, having a lesser tendency to procrastinate, and being a doctoral candidate were significantly associated with higher levels of dissertation self-efficacy. Four other predictor variables: (a) social support, (b) life stressors, (c) finances, and (d) program climate had no effect on dissertation self-efficacy scores.

Standardized coefficients (B) (see Table 5) list the contribution of the predictor variables to the change in dissertation self-efficacy scores. By comparing the standardized coefficients to one another, the predictor advisory relationship ($\beta = .30$) had the largest contribution to a change in dissertation self-efficacy scores, followed by student classification ($\beta = .26$), and procrastination ($\beta = .20$). Social support, life stressors, finances, and program climate were not statistically significant.

The semi-partial correlations have also been calculated for each predictor variable to explain the unique contribution of each predictor variable. The greatest unique contribution was for the predictor variable advisory relationship (.26), followed by student classification (.25), and then procrastination (.20). The strength of the advising relationship, as measured by the doctoral student, made the largest contribution to dissertation self-efficacy scores.

Table 5. Multiple Regression Results

| Variable | <i>B</i> | <i>SE</i> | β | T | <i>p</i> | Semi-Partial Correlation |
|------------------------|----------|-----------|---------|-------|--------------|--------------------------|
| Advisory Relationship | 3.78 | 1.00 | .30 | 3.79 | $\leq .01^*$ | .26 |
| Program Climate | 9.11 | 4.78 | .15 | 1.91 | .06 | .13 |
| Life Stressors | 45.16 | 44.24 | .08 | 1.02 | .30 | .07 |
| Finances | -97.33 | 79.79 | -.09 | -1.22 | .22 | -.09 |
| Social Support | 2.21 | 1.53 | .10 | 1.45 | .14 | .10 |
| Procrastination | 6.89 | 2.44 | .20 | 2.82 | $\leq .01^*$ | .20 |
| Student Classification | 147.44 | 41.72 | .26 | 3.53 | $\leq .01^*$ | .25 |

Adjusted $R^2 = .251$; $N = 157$; $*p < .05$

The Enter method was used in SPSS for the multiple regression analysis because the extant counselor education literature has not yet identified which predictors, i.e., program and personal factors, may be more important than the others in predicting dissertation self-efficacy among doctoral students. One limitation of this method is that only the unique variance is attributed to each predictor variable when the correlation coefficients are calculated (Brace, Kemp, & Snelgar, 2013), which could understate the importance of a predictor variable when it has shared variance with other predictors.

Summary

The purpose of this research study was to examine the relationship of program and personal factors to counselor education students' dissertation self-efficacy. Specifically, this study quantitatively examined whether the program factors of advisory relationship and program climate and the personal factors of social support, life stressors, finances, procrastination, and student classification could significantly predict

dissertation self-efficacy scores among counselor education doctoral students.

Participants' demographic information, data screening, assumptions testing, reliability analysis, and a report of findings from the multiple linear regression analysis were included in this Results section.

From the demographic data of the 157 study participants, the majority were domestic students who were Caucasian, female, married or single, enrolled full-time in their doctoral program, and attended a CACREP program in the southeastern United States. Once screened, the data were considered complete and the assumptions needed to run a multiple linear regression were met. A reliability analysis of the study's instruments indicated that they were highly reliable.

A multiple linear regression was run in order to determine the relationship of program factors and personal factors to dissertation self-efficacy. Results of the analysis indicated that the program factor of advisory relationship and the personal factors of procrastination and student classification significantly predicted dissertation self-efficacy scores and accounted for 25.1% of the variance in dissertation self-efficacy scores. Advisory relationship, as measured by the AWAI-S scale, was the strongest predictor and was responsible for the greatest amount of relative variance in dissertation self-efficacy.

CHAPTER V: DISCUSSION

This research study examined the relationship of program factors and personal factors to counselor education students' dissertation self-efficacy. Results from the analysis concluded that the factors of advisory relationship, student classification, and procrastination significantly predicted dissertation self-efficacy among these participants. This chapter will discuss the results of the research study. The sections of this chapter include the overview, discussion of the results of the study, contributions and limitations of the study, implications of the findings, recommendations for future research, and conclusions.

Overview

Dissertation non-completion has had deleterious effects and costly outcomes for doctoral students, their programs, and their institutions. These outcomes include negative effects on students' mental health (Breckner, 2012; Burkholder, 2012; Willis & Carmichael, 2011), the loss of future scholars and professionals (Baird, 1990; Lovitts, 2001), and the significant loss of faculty and institutional investment in these doctoral students (Bair & Haworth, 1999; Burkard et al., 2014; Kelley & Salisbury-Glennon, 2016). Doctoral students in counselor education programs are included in this population of students who do not complete their doctoral degrees. To address this continual and costly reality, universities and researchers have invested significant financial and intellectual capital in order to understand and improve the phenomenon (Baird, 1990; Council of Graduate Schools, 2009, 2010; Lovitts, 2001). Within counselor education,

individual researchers have begun qualitative inquiry into the factors that affect doctoral program completion (Breckner, 2012; Burkholder, 2012; Hoskins & Goldberg, 2005; Hughes & Kleist, 2005). The results of these qualitative inquiries identified specific program and personal factors that contributed to the counselor education literature on doctoral program completion.

The ability to complete the dissertation is one of the final steps required to complete the doctoral degree. In their studies of dissertation completion, researchers have concluded that dissertation self-efficacy is a construct that affects dissertation completion (Harsch, 2008; Colvin, 2012; Varney, 2003, 2010). Within counselor education, Harsch (2008) completed the only quantitative study of dissertation self-efficacy to date, which established the empirical link between dissertation self-efficacy and dissertation completion. Since that time, no further research has been conducted on counselor education dissertation self-efficacy. Because the link between dissertation self-efficacy and dissertation completion has been established, more investigation was needed into factors that contribute to dissertation self-efficacy as a means of learning how to facilitate student development in this area. The purpose of the current research study was to identify the program and personal factors that affect dissertation self-efficacy in counselor education doctoral students.

Discussion of the Results

Discussion of Prediction Model

The results from the current study revealed that the program factor of advisory relationship and the personal factors of procrastination and student classification

significantly predicted dissertation self-efficacy in counselor education doctoral students. The personal factors of social support, life stressors, finances, and program climate were not found to significantly predict dissertation self-efficacy in participants. Taken together, the predictor variables explained 25.1% of the variance in dissertation self-efficacy and established the program and personal factors that explained the variance in dissertation self-efficacy among participants.

These findings make the first quantitative addition to the counselor education literature on factors that can predict dissertation self-efficacy in doctoral students. Harsch (2008) established the empirical link between dissertation self-efficacy and time-to-degree completion in counselor education students. It is important to recognize this link in the context of the current study. While this study did not examine dissertation completion as an outcome variable, important contributors to dissertation self-efficacy were identified. If counselor educators can build upon these factors, it is possible that the resulting increase in dissertation self-efficacy can contribute to dissertation completion. Qualitative researchers had previously identified factors that affect the dissertation experience and outcome, although no research study had examined these factors in a quantitative analysis until the current study was conducted. Results from the current study support and extend previous results. For example, Harsch (2008) found that advisor and family support, financial security, structural demands, satisfaction with the dissertation, and time limit influenced the amount of time students spent in “All but Dissertation” (ABD) status. The current study concluded that the advising relationship contributed the greatest amount of variance in dissertation self-efficacy, but social

support and finances were not significant in the prediction model. One explanation for this difference may be that Harsch examined the effects of these factors on time-to-degree completion and not dissertation self-efficacy directly. Results from Colvin's (2012) hierarchical regression indicated that neither enrollment status nor teaching assistantship predicted dissertation self-efficacy, which support the current study's results where finances did not significantly predict dissertation self-efficacy. It is possible that dissertation completion and dissertation self-efficacy are different concepts. Although finances might affect completion, students' belief that they are capable of completing the dissertation may not be affected by finances.

In the seven-year funded Ph.D. Completion project, the Council of Graduate Schools (2010) found that financial support, selection, mentoring, program evaluation, program environment, research mode of the field, and processes and procedures were instrumental to dissertation completion across all doctoral programs. The Council of Graduate Schools used information from annual reports, site visits, and institutional proposals to identify themes from the participating institutions on attrition and completion. Finances and program environment were found to be significant in the seven-year funded study. Financial support was identified as the most influential factor in the Council of Graduate Schools' study, which contradicts the findings of the current study, where finances were not found to significantly predict dissertation self-efficacy.

In the current study, the finances variable was dichotomous. It was measured with five items listing common forms of financial assistance, and participants were instructed to place a checkmark next to any of the five sources if they had received that type of

funding during their doctoral program. During the analysis of the current study's results, if participants had one or more sources checked, then that participant was coded as having received financial assistance. Because 93% of the current study's participants indicated one or more sources of financial assistance, the finances variable is skewed and the results of finances should be viewed with caution. In the Council of Graduate Schools' (2010) study, qualitative themes were identified from information provided in response to the study's request for proposal, annual reports, and site visits. The difference in research methodology between the current study and the Council of Graduate Schools' study makes it difficult to compare the results and to provide an analysis of seemingly differing results. The second factor that the Council of Graduate Schools' study found to be instrumental in Ph.D. program completion was program environment or climate, which was not found to be significant in the current study.

Findings from the current study can also be evaluated with the results from prior research studies in non-counselor education disciplines and non-dissertation self-efficacy studies because the current study is the first to directly examine dissertation self-efficacy in counselor education students. For example, by examining national doctoral program completion statistics in all disciplines, Baird (1990) identified having supportive friends and family, having an assistantship, and being enrolled full-time as factors likely to reduce time-to-degree completion. Conversely, dropping out or slow progress was associated with poor social and academic relations with professors and fellow students, poor support from family and friends, working outside the university, and part-time enrollment. The current study provided evidence for the salience of the advisory

relationship, but not social support or financial assistance. Dissertation self-efficacy may be more related to having the support of an advisor along with a belief in one's self to complete all the tasks of the dissertation rather than being dependent upon social support and finances. This result may differ from other studies that examined dissertation outcome, which may be more dependent upon social and financial support.

The multiple linear regression identified the factors which most contributed to the variance in dissertation self-efficacy among participants. It is important to note that the extant counselor education research guided the selection of factors and the current study was exploratory. Although other factors exist which affect dissertation self-efficacy, the variance explained in the current study is valuable.

Discussion of Dissertation Self-Efficacy

Dissertation self-efficacy is an individual's confidence to write and complete the dissertation (Varney, 2003) and the Dissertation Self-Efficacy Scale (Varney, 2003, 2010) has been found to measure doctoral students' belief in their ability to complete their dissertations. In the current study, the DSES mean score for all participants was 1,135, which was just above the high level of self-efficacy cut-off score of 1,088 out of 1,600. Prior studies using the DSES have established high, moderate, and low levels of dissertation self-efficacy based upon the DSES scale score (Harsch, 2008; Varney, 2003). When comparing two cohorts in a doctoral education program, Varney (2003) found that students who exhibited the highest levels of dissertation self-efficacy showed the most amount of progress on their dissertations.

This result suggests that actually doing the dissertation increases dissertation self-efficacy. For counselor educators, it underscores the salience of persistence in doctoral education and the need to support students as they transition through the various challenging roles that they encounter. Bandura's (1977) self-efficacy framework identified performance accomplishments as the strongest source of efficacy, which means that as students have mastery experiences and successes in the beginning years of the program, it can become a source of self-efficacy that carries through to their dissertations. It is important to note that a baseline level of dissertation self-efficacy for counselor education doctoral students now exists from the results of the current study.

Discussion of Advisory Relationship

The advisory relationship had the largest contribution to dissertation self-efficacy of the seven factors under investigation in the current study and is consistent with other studies (Burkholder, 2012; Ferrell, 2007; Flynn et al., 2012; Harsch, 2008; Hoskins & Goldberg, 2005; Neale-McFall & Ward, 2015; Protivnak & Foss, 2009). The AWAI-S scale (Schlosser & Gelso, 2001) measured the working alliance, which was the portion of the relationship that reflected the connection between advisor and advisee that was made during the work toward a common goal. Therefore, the alliance that the doctoral student and advisor formed around the tasks of the program had the largest effect on dissertation self-efficacy. Findings from this current study indicated that the alliance can begin at any time in the program because participants were instructed that their advisor was "the faculty member that has the greatest responsibility for helping guide you through the graduate program" (Schlosser & Gelso, 2001, p. 158). This finding should serve as

another reminder to counselor education faculty that their behaviors and modeling are of critical importance to doctoral students from the beginning of the program. Bandura (1977) identified vicarious experiences and verbal persuasion as sources of self-efficacy, which counselor education faculty can provide to students through joint research projects, conference presentations, and positive and direct feedback on course assignments.

Discussion of Student Classification

Student classification made the second largest contribution to a change in dissertation self-efficacy scores. No prior research studies measuring dissertation self-efficacy have analyzed any potential differences between doctoral students and doctoral candidates. Findings from the current study provided an initial measurement of the effect of students' classification to their dissertation self-efficacy, which was that it positively and significantly predicted dissertation self-efficacy in counselor education doctoral students. Because this predictor variable was used as a dichotomous variable, it meant that the variance in dissertation self-efficacy between participants who were doctoral students from participants who were doctoral candidates was significant. Self-efficacy theory (Bandura, 1982) suggests that experiences that are initially perceived as failures but are then overcome through sustained effort increase self-efficacy and increase the perception that the most difficult tasks can be mastered. Passing the comprehensive examination may be one of those difficult tasks that doctoral candidates have successfully completed.

When compared to prior research studies, findings from the current study support and extend the extant literature. Varney (2003) found that participants in their second

year of doctoral studies in education had higher levels of dissertation self-efficacy than students in their first year of studies, which is consistent with the findings of the current study. The current study, however, provides delineation of dissertation self-efficacy by student classification, and suggests that if students persist in the program to candidacy status, then their dissertation self-efficacy will increase as they persist. This is an important finding and addition to the counselor education dissertation literature.

Discussion of Procrastination

Of the three factors that were found to significantly predict dissertation self-efficacy, procrastination contributed the least amount to the variance in dissertation self-efficacy scores. The current study was the first study to measure procrastination as a separate variable with a valid and reliable instrument and determine its effect on dissertation self-efficacy in counselor education students. Findings from the current study suggested that a lower level of procrastination predicted an increase in dissertation self-efficacy. Tuckman (1991), who developed the scale, computed a mean score of 40 for college students, and the mean score in the current study was 44.99, which meant that participants in the current study had a lesser tendency to procrastinate than the established mean scores.

Results from the current study supplement previous research on procrastination because procrastination had not been measured in relation to dissertation self-efficacy (Green, 1997; Harsch, 2008). Procrastination is a personal factor, which means that it is not directly under the control of the faculty. Completing the dissertation requires a substantial and persistent commitment, and students who tend to procrastinate may feel

overwhelmed as time passes and the tasks become more daunting. Findings from the current study can assist faculty when working with doctoral students who have shown the tendency to procrastinate in coursework by making them aware of the potential deleterious effects of procrastination. Faculty can provide feedback to students who procrastinate by encouraging them to seek further assistance by using university resources and supports to help them understand their procrastination and to address it. For example, universities may offer seminars on procrastination through a university resource center and individual assistance through the counseling center. Students can also use these findings on procrastination to be conscious of methods and strategies that combat procrastination, such as creating tasks milestones that are specific, measurable, achievable, and realistic with a time-based deadline.

Discussion of Program Climate

Four personal factors were found to have no effect on dissertation self-efficacy. Program climate was the first factor which was not found to significantly predict dissertation self-efficacy. Prior researchers have identified program climate as a factor that has affected doctoral students' experiences and persistence (Breckner, 2012; Burkholder, 2012; Hoskins & Goldberg, 2005; Protivnak & Foss, 2009). In the current study, a new scale comprised of five program climate items was used to measure participants' experience of the climate that existed within their doctoral program. This new scale, however, was not able to measure any effect of program climate on dissertation self-efficacy. This result is surprising when compared to prior research studies on program climate. Because there has not been an instrument developed to

measure program climate, a further exploration of the methods needed to evaluate program climate are warranted. Identifying additional dimensions of program climate and measuring other samples of participants would add to the understanding of program climate and its effect on dissertation self-efficacy.

Discussion of Social Support

Social support was the second of the four factors that had no effect, which is a finding consistent with prior counselor education quantitative research. For example, Harsch (2008) found no mean differences in family support between dissertation completers and those who were still working on their dissertations. Findings from the current study, however, do not corroborate much of the existing literature on the role of social support and dissertation. Qualitative researchers have identified the importance of the social support factor in the dissertation process (Flynn et al., 2012; Protivnak and Foss, 2009). Kelley (2011) identified friend and family support as a covariate predictor that significantly influenced time-to-degree completion in doctoral students from multiple disciplines. The current study did not provide a conclusive result to this debate. Further research is needed in order to determine the effects of social support on dissertation self-efficacy.

Individuals who are socially persuaded that they possess the capabilities to master difficult situations and are given help are likely to put forth a greater effort toward a goal than those who are only given help without the social persuasion (Bandura, 1977). When the persuasion comes from people who are influential or accomplished, this can be a positive source of self-efficacy (Bandura, 1986). Varney (2003) found that being in a

cohort had a positive and statistically significant effect on dissertation self-efficacy, although the construct of being in a cohort may not be the same as social support of friends and therefore is difficult to compare to the results of the social support factor in the current study. One potential explanation is that the verbal persuasion source of self-efficacy (Bandura, 1977) has more power to affect a student's belief when it comes from a knowledgeable peer who is experiencing the same difficulty or from an accomplished faculty member. While family support may be significant in persisting, having someone who understands the difficulties presented by a dissertation and believes that the student is capable of this task, such a member of the cohort, may foster greater belief in self to complete the dissertation than from a friend.

Discussion of Life Stressors

Life stressors were used as a predictor variable and were found to have no effect on dissertation self-efficacy. For the life stressors predictor variable, the current study used five yes or no items that broadly measured life stressors. The current study was the first quantitative study in the counselor education literature to examine the effect of life stressors on dissertation self-efficacy. The qualitative literature presented a strong relationship between health and dissertation outcome and one prior quantitative study (Bridgmon, 2007) found that health problems negatively influenced dissertation completion across multiple doctoral disciplines. Prior findings were not supported by the current study. One explanation for the result that life stressors have no effect on dissertation self-efficacy is that life stressors do not influence the belief in the ability to

complete the dissertation tasks per se, but significant negative life stressors, including health, can affect the ability to persist in the program.

The finding that no mean difference existed in the dissertation self-efficacy scores between those with no life stressors and those who experienced one or more life stressors was surprising. This suggests that students who experience life stressors during the doctoral program are able to maintain the same level of belief as those who do not experience life stressors during the program. Further investigation is needed to better understand this phenomenon. Having the physical health and absence of life stressors needed to complete the dissertation appears to be a different construct than the belief in the ability to complete the dissertation tasks.

Discussion of Finances

Findings from the current study on finances were the first ones in counselor education that examined its relationship to dissertation self-efficacy. Previous studies (Harsch, 2008; Kelley, 2011) found that finances significantly predicted time-to-degree completion. The comprehensive Ph.D. Completion Study conducted by the Council of Graduate Schools (2010) concluded that financial assistance and financial support were the highest-rated factors influencing doctoral students' program completion. The current study, however, measured finances and their ability to predict dissertation self-efficacy and found no effect. One explanation for this is that finances may not affect students' belief in their ability to complete the dissertation tasks but could affect their ability to remain in the program. Because finances were found to have no effect on dissertation

self-efficacy but have been found to be so salient in time-to-degree completion, further investigation is warranted.

Contributions of the Study

Dissertation and doctoral program completion have been the focus of institutions and researchers because of the high cost of non-completion (Baird, 1990; Council of Graduate Schools, 2010). In counselor education, only one quantitative study has been published (Harsch, 2008), which has left a large gap in the knowledge that counselor educators and institutions need in order to understand this situation and to devise solutions to increase the completion rate. The current study has contributed to the understanding of doctoral program completion by examining the role of dissertation self-efficacy in counselor education students. Four specific contributions have resulted from the current study.

The study's first contribution was that it examined specific constructs, such as advisory relationship and procrastination, that have been identified in the literature and measured with valid and reliable instruments. The program and personal factors that previous researchers have identified were used as predictor variables in the study's major analysis and found to significantly predict dissertation self-efficacy. The study has now added specific program and personal factors to the counselor education dissertation literature that faculty and programs can use to both diagnose and design solutions to improve the dissertation experience.

The second contribution of this study is that the advisory relationship had the largest effect and was the strongest predictor of dissertation self-efficacy. Harsch (2008)

found that “advisor support” (p. 83) was one of six variables that accounted for a significant amount of variance in time-to-degree completion, and Varney (2003) found that “being mentored” (p. 100) had a positive and statistically significant correlation with dissertation self-efficacy. The current study used a well-researched instrument with high levels of validity and reliability (AWAI-S; Schlosser & Gelso, 2001) to establish that it was specifically the connection between the advisor and student that is made while working toward common goals that had the largest effect on dissertation self-efficacy. It is important to note that the term advisor in the current study was defined as “the faculty member that has the greatest responsibility for helping guide you through your graduate program (e.g., advisor, major professor, committee chair, dissertation chair)” (Schlosser & Gelso, 2001, p. 158). Because of the high level of importance that participants placed on the advising relationship, findings from the current study indicate that advisors influence dissertation-self-efficacy before the dissertation process begins and advisors other than the dissertation chair have this influence with their students. Mentoring students beginning at program inception can have immediate and long-term effects on dissertation self-efficacy. This connection between the student and advisor is a specific construct that faculty can use when working with students and when measuring faculty effectiveness throughout the program and in the dissertation process. This contribution from the current study provides faculty with further incentive to be aware of the importance of the student-faculty relationship, especially when deciding how to pair students with chairs for dissertation. Students should also note that the connections they

establish with faculty while working on projects and research prior to dissertation will affect their dissertation self-efficacy.

Concluding that social support, life stressors, finances, and program climate have no effect on dissertation self-efficacy is the third contribution of the study because it contradicts prior related dissertation research. Previous studies have concluded that finances were the most important or very important in program completion and time-to-degree completion (Council of Graduate Schools, 2010; Harsch, 2008). The current study found that finances had no significant effect on dissertation self-efficacy, which suggests that dissertation self-efficacy is most affected by factors other than finances. This contribution is important because it provides faculty and programs with information needed to design dissertation interventions and strategies in addition to simply offering a financial package to students. While students' belief in their ability to complete a dissertation may not be related to finances, the ability to persist in the graduate program until completion may have a financial component. More exploration on the impact of accepting a job during the dissertation is needed. The solution to improving dissertation completion is multi-dimensional and requires the commitment and excellence of the faculty. In addition, when students experience life stressors, it does not predict a drop in their belief to complete their dissertations, which is important for them and the faculty to understand. Using the factors that have been found to influence dissertation self-efficacy, such as the advisory relationship and procrastination, are an option for students and faculty when difficulties arise for students.

Providing a more robust and comprehensive understanding of dissertation self-efficacy in counselor education students is the fourth contribution of this study. Two previous research studies on dissertation self-efficacy (Colvin, 2012; Harsch, 2008) used a group of participants who had already completed their dissertations and degrees, which likely increased their dissertation self-efficacy because they had successfully completed the task (Bandura, 1984). A third study on dissertation self-efficacy (Varney, 2003) used participants who were either first-year or second-year students, which narrowed the applicability of results. The current study, however, had participants who were either doctoral students or doctoral candidates, which expanded the portrait and understanding of dissertation self-efficacy measured by a comprehensive range of students. In addition, by having all of the CACREP regions represented and having a demographic footprint very similar to CACREP's (2017) "average" student, it provides faculty and programs with a current and accurate understanding of the CACREP doctoral student and the dissertation.

Limitations of the Study

Despite the contributions of this study to the literature on dissertation self-efficacy in counselor education doctoral students, four limitations to the study exist. The first limitation is that the instruments used in the study were self-report, which means that participants may have developed strategies to provide answers based upon social desirability (Edwards, 1957). In addition, participants who felt strongly about the dissertation experience may have self-selected and therefore influenced the results.

Although the survey participation request was sent to all of the CACREP program contacts, not all of the programs participated, which limits the generalizability of the results. While all five of the CACREP regions were represented in the results, not all CACREP programs were given the opportunity to participate through their program contact. Two program contacts responded that they were unable to forward the survey request to their students because their University Internal Review Board prohibited this practice. It is possible that students in these two programs may have seen the survey request via the COUNSGRAD listserv, although this remains unknown. Some program contacts responded that they had forwarded the survey request to their students, and some program contacts did not respond with any information about their handling of the survey request.

The third limitation of the study is that students who departed their programs were not represented in the current study. Their experience would have provided meaningful data on the program and personal factors that affected their dissertation self-efficacy. Such a comparison would have provided additional support for the results of this study. The voices of those who have departed study continue to remain silent.

The fourth limitation of the current study is the research design itself. Because the design was non-experimental, causality cannot be inferred. Correlational research precludes the claim that program and personal factors caused a change in dissertation self-efficacy, although it has established that a relationship exists among them. In addition, confounding variables may exist that have influenced the results.

Implications of the Findings

The findings of this study provide faculty, students, and programs with information critical to their success. For faculty, the knowledge that the advisory relationship is the strongest predictor of dissertation self-efficacy is vital to have when working with students on their coursework and dissertations. This finding includes students who have not yet begun their dissertations and yet are influenced by the connection with their advisor. One implication is that faculty can use classwork, research, and professional development opportunities to establish the connection with their students while working on other common tasks that will begin to increase the students' belief in their ability to complete the dissertation. Perhaps programs need to help students seek out opportunities to work on common tasks with faculty and develop the relationships with faculty members with whom they feel the strongest connection. Both students and faculty have a shared opportunity to make an investment in a relationship that can carry through the dissertation stage.

By understanding that students' classification has a relationship to dissertation self-efficacy, programs can seek to normalize the dissertation experience and inform students that their self-efficacy is predicted to increase as they persist into candidacy. Faculty can encourage students to use their supports and university resources when they are struggling with their belief about their ability to complete the dissertation. Students can be hopeful that over time, persisting in the program, establishing a strong advisory relationship, and avoiding procrastination will increase their dissertation self-efficacy.

Another implication from the current study is that it is critical for programs to measure their students at different points in their program in order to understand how dissertation self-efficacy changes. Because students can drop out at different points in their program, once they leave, it has proven elusive to measure and examine their experience. Having student data continually throughout the program may allow programs to identify how program and personal factors influence dissertation self-efficacy over time. For example, by measuring all of the enrolled students each year, programs could develop a longitudinal perspective of changes in dissertation self-efficacy. By doing this, programs would also have data on students who do not persist.

Additional variables are affecting dissertation self-efficacy. Although the variance explained was significant, other unidentified variables are either affecting dissertation self-efficacy or confounding its measurement. The extant literature provided the program and personal factors under investigation in the current study, and this study's findings corroborated and extended prior qualitative and quantitative research. These findings give faculty and programs information to use and also the inspiration to continue research. The high cost of non-completion and the invaluable contribution of future completers to academia, science, industry, and government make the search for additional factors worthwhile.

The final implication of the current study is that because the doctoral degree is the apex of the education process (Del Rio & Mieling, 2012), it requires a persistent commitment from both the student and faculty to complete it. Even the highest achieving students must meet program requirements and perform tasks that they have not

experienced previously. Faculty must be flexible yet consistent in their work with doctoral students. This relationship between students and faculty, and the mutual commitment that it requires for success, is highlighted by the rigor of the dissertation process.

Recommendations for Future Research

The comprehensive study of doctoral program completion, which includes the dissertation experience and outcomes, is still in the beginning stages. Although the current study has contributed valuable research to the understanding of dissertation self-efficacy, additional research is needed in order to more fully comprehend the phenomenon. Harsch (2008) correctly observed that a longitudinal study of how dissertation self-efficacy develops, shifts, and increases or decreases over time is needed to more fully understand dissertation self-efficacy, which still remains a gap in the literature. Following a representative sample of students through their doctoral program and measuring their dissertation self-efficacy at multiple points would provide meaningful and needed data. In addition, it would be helpful to be able to associate the student's dissertation self-efficacy, measured at a specific point in time, with the future dissertation outcome, which no prior study has examined. Although an initial link between dissertation self-efficacy and time-to-degree completion has been established (Harsch, 2008), future studies can refine the relationship.

Another area of future research includes examining the personal factors that prior qualitative researchers have discovered, such as personality traits (Flynn et al., 2012; Hughes & Kleist, 2005) and personal issues that affect students' ability to maintain

energy to continue in the program (Protivank & Foss, 2009), with quantitative analysis. The benefits to faculty and programs of having this data include assisting them with more targeted student selection criteria in order to predict dissertation completion, and designing interventions to propel students toward completion. Additional factors must be examined, such as cohort support, motivation, and stamina.

Gaining a more comprehensive understanding of dissertation self-efficacy also requires examining the experiences of those who did not complete their programs. The extremely limited understanding of those who dropped out from their programs has come from the few qualitative investigations with small sample sizes (Breckner, 2012; Golde, 2005), which has prevented their measurement. Including the detailed experiences of those who dropped out would be enormously helpful in understanding the dissertation phenomenon because this remains unexplored at the current time.

The final component of gaining a more comprehensive understanding of dissertation self-efficacy would come from examining the faculty perspective. In counselor education, Borders et al. (2015) provided data from CACREP faculty on their dissertation products, composition of dissertation committees, and their satisfaction ratings with dissertation products and processes. Missing from this study was the detailed examination and measurement of the factors that faculty found led to both successful and unsuccessful dissertation outcomes. Having the faculty perspective, along with their students' perspective, is necessary in order to have comparative data. It is possible to collect this data from dyads.

Conclusions

Doctoral program completion has been the subject of investigation because of the costs and benefits associated with it. Individual researchers and large-scale, grant-funded studies (Council of Graduate Schools, 2010) have sought to increase completion and decrease attrition rates. One key point in doctoral studies that has traditionally led to attrition is the inability to complete the dissertation. Many variables affect the dissertation experience, although their identification and measurement are in their infancy.

The current study attempted to provide additional information and ideas on the doctoral program and dissertation experience in counselor education by examining personal and program factors and their effect on dissertation self-efficacy. Results from the current study indicated that the following conditions led to the highest levels of dissertation self-efficacy: an advisor-advisee working alliance characterized by a strong connection between the two, a student classified as a doctoral candidate who has a tendency not to procrastinate. Faculty, programs, and students can use these findings, along with existing counselor education literature, to structure interventions to increase dissertation self-efficacy. Future research will assist in identifying and examining additional factors that affect the dissertation experience and doctoral program outcomes.

REFERENCES

- Ampaw, F. (2010). *The effect of labor market conditions and financial aid packages on doctoral students retention* (Unpublished doctoral dissertation). North Carolina State University, Raleigh, North Carolina.
- Ampaw, F., & Jaeger, A., (2012). Completing the three stages of doctoral education: An event history analysis. *Research in Higher Education, 53*, 640-660.
- Armsden, G., & Greenberg, M. (1987). Inventory of parent and peer attachment: Individual differences and their relationships to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*, 427-454.
- Association for Counselor Education and Supervision. (2017). Retrieved from <http://www.acesonline.net>
- Austin, A. (2002). Preparing the next generation of faculty: Graduate school as socialization to the academic career. *The Journal of Higher Education, 73*, 94-121.
- Bair, C., & Haworth, J. (1999). Doctoral student attrition and persistence: A meta-synthesis of research. Association for the Study of Higher Education annual meeting paper.
- Baird, L. (1990). Disciplines and doctorates: The relationships between program characteristics and duration of doctoral study. *Research in Higher Education, 31*, 369-385.
- Baird, L. (1993). Using research and theoretical models of graduate student progress. *New Directions for Institutional Research, 80*, 3-12.

- Bako-Okolo, S. (1993). *The effects of selected variables on the research self-efficacy of doctoral candidates in the College of Education at the University of Akron*. Retrieved from ProQuest Dissertations and Theses Global. (9623204)
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122-147.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (2005). Guide for constructing self-efficacy scales. In F. Pajares & T. Undan (Eds.), *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing.
- Bandura, A., and Barab, P. (1973). Processes governing disinhibitory effects through symbolic modeling. *Journal of Abnormal Psychology*, *82*, 1-9.
- Bandura, A., Barbaranelli, C., Caprara, G., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development*, *67*, 1206-1222.
- Barnes, B., Williams, E., & Archer, S. (2010). Characteristics that matter most: Doctoral students' perceptions of positive and negative advisor attributes. *NACADA Journal*, *30*, 34-46.

- Berkenkotter, D., Huckin, T., & Ackerman, J. (1991). Social context and socially constructed texts: The initiation of a graduate student into a writing research community. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 211-234). Madison, WI: University of Wisconsin Press.
- Blum, L. (2010). The “All-But-the-Dissertation” student and the psychology of the doctoral dissertation. *Journal of College Student Psychotherapy, 24*, 74-85.
- Borders, D., Wester, K., Fickling, M., & Adamson, N. (2015). Dissertations in CACREP-accredited counseling doctoral programs: An initial investigation. *The Journal of Counselor Preparation and Supervision, 7*, 2-39.
- Bowen, W., & Rudenstine, N. (1992). *In pursuit of the Ph.D.* Princeton, NJ: Princeton University Press.
- Brace, N., Kemp, R., & Snelgar, R. (2013). *SPSS for psychologists*. New York: Taylor & Francis.
- Breckner, J. (2012). *A phenomenological study of doctoral student attrition in counselor education* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses Global. (3570945)
- Bridgmon, K. (2007). *All but dissertation stress among counseling and clinical psychology students* (Unpublished doctoral dissertation). Northern Arizona University, Flagstaff, AZ.
- Briggs, C. & Pehrsson, D. (2008). Research mentorship in counselor education. *Counselor Education and Supervision, 48*, 101-113.

- Britner, S., & Pajares, F. (2006). Sources of science self-efficacy beliefs of middle school students. *Journal of Research in Science Training, 43*, 485-499.
- Burkard, A., Knox, S., DeWalt, T., Fuller, S., Hill, C., & Schlosser, L. (2014). Dissertation experiences of doctoral graduates from professional psychology programs. *Counseling Psychology Quarterly, 27*, 19-54.
- Burkholder, D. (2012). Returning counselor education doctoral students: Issues of retention, attrition, and perceived experiences. *Journal of Counselor Preparation and Supervision, 4*, 6-23.
- Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research*. Dallas, TX: Houghton Mifflin.
- Carlson, L., Portman, T., & Bartlett, J. (2006). Self-management of career development: Intentionality for counselor educators in training. *Journal of Humanistic Counseling, Education and Development, 45*, 126-137.
- Casto, C., Caldwell, C., & Salazar, C. (2005). Creating mentoring relationships between female faculty and students in counselor education: Guidelines for potential mentees and mentors. *Journal of Counseling & Development, 83*, 331-336.
- Cervone, D. (2000). Thinking about self-efficacy. *Behavior Modification, 24*, 30-56.
- Colvin, T. (2012). *The role of academic help-seeking attitudes, achievement goal orientations, and dissertation self-efficacy in dissertation progress* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses Global. (3570945)

- Council for Accreditation of Counseling and Related Educational Programs. (2015). *2016 CACREP Standards*. Alexandria, VA: Author. Retrieved from <http://www.cacrep.org/wp-content/uploads/2016/06/2016-Standards-with-Glossary-rev-2.2016.pdf>
- Council for Accreditation of Counseling and Related Educational Programs. (2016). *Annual report 2015*. Alexandria, VA: Author. Retrieved from <http://www.cacrep.org/about-cacrep/publications/cacrep-annual-reports>
- Council for Accreditation of Counseling and Related Educational Programs. (2017). *Annual report 2016*. Alexandria, VA: Author. Retrieved from <http://www.cacrep.org/about-cacrep/publications/cacrep-annual-reports>
- Council of Graduate Schools. (2009). *Ph.D. completion and attrition: Findings from exit surveys of Ph.D. completers*. Washington, DC: Council of Graduate Schools.
- Council of Graduate Schools. (2010). *Ph.D. completion project: Policies and practices to promote student success*. Washington, DC: Council of Graduate Schools.
- Cusworth, S. (2001, August). *Orientation and retention of Counseling PhD students: A qualitative study*. Paper presented at the annual conference of the American Psychological Association, San Francisco. (ERIC Document Reproduction Services No. ED458513)
- Dahlem, N., Zimet, G., & Walker, R. (1991). The Multidimensional Scale of Perceived Social Support. *Journal of Clinical Psychology, 47*, 756-761.

- D'Andrea, L. (2002). Obstacles to completion of the doctoral degree in colleges of education: The professors' perspective. *Educational Research Quarterly*, 25, 42-58.
- Del Rio, C., & Mieling, G. (2012). What you need to know: PhDs in counselor education and supervision. *The Family Journal: Counseling and Therapy for Couples and Families*, 20, 18-28.
- Derogatis, L., Lipman, R., Rickels, K., Uhlenhuth, E., & Covi, C. (1974). The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioral Science*, 19, 1-15.
- Dillman, D., & Bowker, D. (1990). The web questionnaire challenge to survey methodologists. Retrieved from <http://survey.sesrc.wsu.edu/dillman/papers.htm>
- Dillman, D., Tortora, R., & Bowker, D. (1999). Principles for constructing web surveys. Retrieved from <http://claudiaflowers.net/rsch8140/PrinciplesforConstructing-WebSurveys.pdf>
- Dollarhide, C., Gibson, M., & Moss, J. (2013). Professional identity development of counselor education doctoral students. *Counselor Education and Supervision*, 52, 137-150.
- Edwards, A. (1957). *The social desirability variable in personality assessment and research*. New York, NY: Holt, Rinehart, & Winston.
- Efstation, J., Patton, M., & Kardash, C. (1990). Measuring the working alliance in counselor supervision. *Journal of Counseling Psychology*, 27, 322-329.

- Faghihi., F. (1998). *A study of factors related to dissertation progress among doctoral candidates: Focus on student research self-efficacy as a result of their research training and experiences* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses Global. (9834228)
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.
- Ferrell, R. (2007). *Personal experiences of mentoring among doctoral students in counselor education* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3258798)
- Fitzgerald, A. (2014). *The relationship of causal attributions to dissertation stress among doctoral students in counseling* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3621090)
- Flynn, S., Chasek, C., Harper, I., Murphy, K., & Jorgensen, M. (2012). A qualitative inquiry of the counseling dissertation process. *Counselor Education and Supervision, 51*, 242-255.
- Fraenkel, J., Wallen, N., & Hyun, H. (2011). *How to design and evaluate research in education*. (8th ed.). New York, NY: McGraw-Hill.
- Gardner, S. (2007). "I heard it through the grapevine": Doctoral student socialization in chemistry and history. *Higher Education, 54*, 723-740.
- Gardner, S. (2009). Student and faculty attributions of attrition in high and low-completing doctoral programs in the United States. *Higher Education, 58*, 97-112.

- Gardner, S. (2010). Contrasting the socialization experiences of doctoral students in high- and low-completing departments: A qualitative analysis of disciplinary contexts at one institution. *The Journal of Higher Education, 81*, 61-81.
- Gelso, C. (1993). On the making of a scientist-practitioner: A theory of research training in professional psychology. *Professional Psychology: Research and Practice, 24*, 468-476.
- Gelso, C., Mallinckrodt, B., & Judge, A. (1996). Research training environment, attitudes toward research, and research self-efficacy: The revised Research Training Environment Scale. *The Counseling Psychologist, 24*, 302-322.
- Golde, C. (2005). The role of the department and discipline in doctoral student attrition: Lessons from four departments. *The Journal of Higher Education, 76*, 669-700.
- Gravois, J. (2007). In humanities, 10 years may not be enough to get a PhD. *The Chronicle of Higher Education, 53*, A1.
- Green, K. (1997). Psychosocial factors affecting dissertation completion. *New Directions for Higher Education, 99*, 57-64.
- Groves, R. (1989). *Survey errors and survey costs*. New York, NY: Wiley.
- Hardy, L. (2015). *Dissertation processes and influences: Ed.D. vs. A.B.D.* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3739686)
- Harsch, D. (2008). The role of self-efficacy, locus of control, and self-handicapping in dissertation completion. (Unpublished doctoral dissertation). University of Akron, Ohio.

- Hazler, R., & Carney, J. (1993). Student-faculty interactions: An underemphasized dimension of counselor education. *Counselor Education and Supervision, 33*, 80-88.
- Henfield, M., Woo, H., & Washington, A. (2013). A phenomenological investigation of African American counselor education students' challenging experiences. *Counselor Education and Supervision, 52*, 122-136.
- Hoskins, C., & Goldberg, A. (2005). Doctoral student persistence in counselor education programs: Student-program match. *Counselor Education and Supervision, 44*, 175-188.
- Hughes, F., & Kleist, D. (2005). First-semester experiences of counselor education doctoral students. *Counselor Education and Supervision, 45*, 97-108.
- Kelley, M. (2011). *The role of self-regulation in doctoral students' status of all but dissertation* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3480644)
- Kelley, M., & Salisbury-Glennon, J. (2016). The role of self-regulation in doctoral students' status of All But Dissertation (ABD). *Innovative Higher Education, 41*, 87-100.
- Kluever, R., & Green, K. (1999). The Responsibility Scale: A research note on dissertation completion. *Educational and Psychological Measurement, 58*, 520-531.

- Knox, S., Burkard, A., Janecek, J., Pruitt, N., Fuller, S., & Hill, C. (2011). Positive and problematic dissertation experiences: The faculty perspective. *Counseling Psychology Quarterly, 24*, 55-69.
- Lambie, G., Smith, H., & Ieva, K. (2009). Graduate counseling students' levels of ego development, wellness, and psychological disturbance: An exploratory investigation. *Adultspan Journal, 8*, 114-127.
- Lambie, G., Sias, S., Davis, K., Lawson, G., & Akos, P. (2008). A scholarly writing resource for counselor educators and their students. *Journal of Counseling & Development, 86*, 18-25.
- Lambie, G., & Vaccaro, N. (2011). Doctoral counselor education students' levels of research self-efficacy, perceptions of the research training environment, and interest in research. *Counselor Education and Supervision, 50*, 243-258.
- Long, J. (1987). *Factors related to attrition and success in degree and non-degree doctoral students in education* (Unpublished doctoral dissertation). Northern Arizona University, Flagstaff.
- Lovitts, B. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, MD: Rowman & Littlefield.
- Malone, B., Nelson, J., & Nelson, C. (2004). Academic and affective factors contributing to degree completion of doctoral students in educational administration. *The Teacher Educator, 40*, 33-55.
- Mayers, A. (2013). *Introduction to statistics and SPSS in psychology*. London: Pearson Education Limited.

- McAloon, R. (2004). Publish or perish: Writing blocks in dissertation writers – the ABD impasse. *Modern Psychoanalysis, 29*, 229-250.
- McDermont, B. (2002). *The utility of perceived stress, locus of control, and type A behavior pattern as predictors of doctoral degree completion in a non-traditional Ed.D. program* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3055934)
- Menard, S. (1995). *Applied logistical regression analysis* (2nd ed.). London: Sage.
- Myers, R. (1990). *Classical and modern regression application* (2nd ed.). Boston, MA: Duxbury Press.
- Neale-McFall, C. (2011). *Perceived satisfaction of counseling doctoral students with their dissertation chairperson* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3492256)
- Neale-McFall, C., & Ward, C. (2015). Factors contributing to counselor education doctoral students' satisfaction with their dissertation chairperson. *The Professional Counselor, 5*, 185-194.
- Nettles, M., & Millett, C. (2006). *Three magic letters: Getting to Ph.D.* Baltimore, MD: The Johns Hopkins Press.
- Pajares, F., (1996). Self-efficacy beliefs in achievement settings. *Review of Educational Research, 66*, 543-578.

- Pajares, F. (1997). Current directions in self-efficacy research. In M. Maehr & P. Pintrich (Eds.), *Advances in motivation and achievement*. Greenwich, CT: JAI Press.
- Petko, J. (2012). *Counselor education doctoral students' level of research self-efficacy, interest in research, and research mentoring: A cross-sectional investigation* (Unpublished doctoral dissertation). University of Central Florida, Orlando
- Phillips, J. (1992). Research self-efficacy and research training environment in counseling psychology. *Dissertation Abstracts International*, 53, 4934-B.
- Protivnak, J., & Foss, L. (2009). An exploration of themes that impact the counselor education doctoral student experience. *Counselor Education and Supervision*, 48, 239-256.
- Ray, S. (2007). Selecting a doctoral dissertation supervisor: Analytical hierarchy approach to the multiple criteria problem. *International Journal of Doctoral Studies*, 2, 23-32.
- Rice, K., Choi, C-C., Zhang, Y., Villegas, J., Ye, H., Anderson, C., ... Bigler, M. (2009). International student perspectives on graduate advising relationships. *Journal of Counseling Psychology*, 56, 376-391.
- Schlosser, L., & Gelso, C. (2001). Measuring the working alliance in advisor-advisee relationships in graduate school. *Journal of Counseling Psychology*, 48, 157-167.
- Schlosser, L., & Gelso, C. (2005). The Advisor-Advisee Working Alliance Inventory-Advisor Version: Scale development and validation. *Journal of Counseling Psychology*, 52, 650-654.

- Schlosser, L., & Kahn, J. (2007). Dyadic perspectives on advisor-advisee relationships in counseling psychology doctoral programs. *Journal of Counseling Psychology, 54*, 211-217.
- Schlosser, L., Knox, S., Moskovitz, A., & Hill, C. (2003). A qualitative examination of graduate advising relationships: The advisee perspective. *Journal of Counseling Psychology, 50*, 178-188.
- Schlosser, L., Lyons, H., Talleyrand, R., Kim, B., & Johnson, W. (2011). Advisor-advisee relationships in graduate training programs. *Journal of Career Development, 38*, 3-18.
- Schunk, D. (1994). Self-regulation of self-efficacy and attributions in academic settings. In D. Schunk & B. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 75-99). Hillsdale, NJ: Erlbaum.
- Schunk, D., & Pajares, F. (2002). The development of academic self-efficacy. In A. Wigfield & J. Eccles (Eds.), *Development of academic achievement* (pp. 15-31). San Diego, CA: Academic Press.
- Smallwood, S. (2004). Doctor dropout: High attrition from Ph.D. programs is sucking away time, talent, and money and breaking some hearts, too. *The Chronicle of Higher Education, 50*, A10.

- Sowell, R., Zhang, T., Redd, K., & King, M. (2008). *Ph.D. completion and attrition: Analysis of baseline program data from the Ph.D. Completion Project*. Washington, DC: Council of Graduate Schools.
- Soto Anthony, J. (2002). Reexamining doctoral student socialization and professional development: Moving beyond the congruence and assimilation orientation. In J. Smart & W. Tierney (Eds.), *Higher education: Handbook of theory and research* (pp.349-380). Norwell, MA: Kluwer Academic Publishers.
- Tabachnick, B., & Fidell, L. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago, IL: University of Chicago Press.
- Trepal, H., Stinchfield, T., & Haiyasoso, M. (2014). Great expectations: Doctoral student mothers in counselor education. *Adultspan Journal*, 13, 30-45.
- Tuckman, B. (1990). Groups versus goal-setting effects on the self-regulated performance of students differing in self-efficacy. *Journal of Experimental Education*, 58, 291-298.
- Tuckman, B. (1991). The development and concurrent validity of the Procrastination Scale. *Educational and Psychological Measurement*, 51, 473-480.
- Tuckman, B. (1998). Using tests as an incentive to motivate procrastinators to study. *Journal of Experimental Education*, 66, 141-147.

- Tuckman, B. (2005). Relations of academic procrastination, rationalizations, and performance in a web course with deadlines. *Psychological Reports, 96*, 1015-1021.
- Tuckman, B., & Sexton, T. (1989, June). *The effect of feedback on procrastination*. Paper presented at the meeting of the American Psychological Association, New Orleans, LA.
- Vaccaro, N. (2009). *The relationship between research self-efficacy, perceptions of the research training environment and interest in research in counselor education doctoral students: An ex-post-facto, cross-sectional correlational investigation* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3357884)
- Varney, J. (2003). *A study of the relationships among doctoral program components and dissertation self-efficacy on dissertation progress* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3171591)
- Varney, J. (2010). The role of dissertation self-efficacy in increasing dissertation completion: Sources, effects and viability of a new self-efficacy construct. *College Student Journal, 44*, 932-947.
- Wei, M., Tsai, P-C., Chao, R., Du, Y., & Lin, S-P. (2012). Advisory working alliance, perceived English proficiency, and Acculturative Stress. *Journal of Counseling Psychology, 59*, 437-488.
- Willis, B., & Carmichael, K. (2011). The lived experience of late-stage doctoral student attrition in counselor education. *Qualitative Report, 16*, 192-207.

- Yeager, B. (2008). *PhD or A.B.D.: To be or not to be?* (Doctoral dissertation). Retrieved from Proquest Dissertations and Theses. (3310790)
- Yockey, R. (2016). Validation of the short form of the Academic Procrastination Scale. *Psychological Reports, 118*, 171-179.
- Zimet, G., Dahlem, N., Zimet, S., & Farley, G. (1988). The Multidimensional Scale of Perceived Support. *Journal of Personality Assessment, 52*, 30-41.
- Zimet, G., Powell, S., Farley, G., Werkman, S., & Berkoff, K. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Support. *Journal of Personality Assessment, 55*, 610-617.

APPENDIX A: CACREP PROGRAM RECRUITMENT EMAIL

Dear Dr. ,

My name is Gregory Georgiou, and I am a doctoral student in the Counselor Education and Supervision program at the University of North Carolina at Charlotte. I am requesting your assistance to recruit your doctoral students to participate in an online survey as part of my dissertation requirements for a Doctor of Philosophy degree in Counselor Education and Supervision.

You can support a new study on dissertation self-efficacy and doctoral research by forwarding a separate email to all of your doctoral students, who can be in any year in the program and either full-time and part-time students. Thank you for all of your assistance with my study. I would be happy to share my findings with you once the study is completed.

Dear Fellow CACREP Doctoral Student,

The purpose of the study is to examine the program factors and personal factors that affect dissertation self-efficacy in counselor education doctoral students. One goal of this research is to assist doctoral students, counselor education faculty, and universities to implement strategies that will increase dissertation completion rates and decrease the personal and institutional costs of dissertation non-completion.

All doctoral students and doctoral candidates who are enrolled either full-time or part-time in a CACREP-accredited program are eligible to participate.

The online survey will take approximately ten minutes to complete. If you choose to participate in this study, your information will be kept confidential and anonymous. If you would like to be entered into a drawing to receive one of the twenty-five \$20.00 Amazon.com gift cards, your email address will not be linked to your survey responses.

Should you have any questions or comments, please feel free to contact me at ggeorgi2@uncc.edu UNC Charlotte wants to make sure that all research participants are treated in a fair and respectful manner. Contact the university's Office of Research Compliance at [\(704\) 687-1871](tel:(704)687-1871) if you have questions about your rights as a study participant.

This research study has been approved by the Institutional Review Board at the University of North Carolina at Charlotte (IRB Study #16-1037). If you would like to participate in this study, click on the link below or paste it into your web browser and you

APPENDIX A: CACREP PROGRAM RECRUITMENT EMAIL - continued

will be directed to the Informed Consent Form. After you review the Informed Consent Form by clicking on the 'Yes' button, you will begin the online survey.

<http://uncc.surveymshare.com/s/AYAQWPB>

Thank you for your consideration and assistance with this study.

Sincerely,

Gregory A. Georgiou, LPC
Doctoral Candidate
Department of Counseling
University of North Carolina at Charlotte

Dr. Susan Furr, Ph.D.
Professor
Department of Counseling
University of North Carolina at Charlotte

APPENDIX B: LISTSERV PARTICIPANT REQUEST

Dear Fellow CACREP Doctoral Students,

My name is Gregory Georgiou, and I am inviting you to participate in an online survey as part of my dissertation requirements for a Doctor of Philosophy degree in Counselor Education and Supervision at the University of North Carolina at Charlotte. The purpose of the study is to examine the program factors and personal factors that affect dissertation self-efficacy in counselor education doctoral students. One goal of this research is to assist doctoral students, counselor education faculty, and universities to implement strategies that will increase dissertation completion rates and decrease the personal and institutional costs of dissertation non-completion.

All doctoral students and doctoral candidates who are enrolled either full-time or part-time in a CACREP-accredited program are eligible to participate.

The online survey will take approximately ten minutes to complete. If you choose to participate in this study, your information will be kept confidential and anonymous. If you would like to be entered into a drawing to receive one of the twenty-five \$20.00 Amazon.com gift cards, your email address will not be linked to your survey responses.

Should you have any questions or comments, please feel free to contact me at ggeorgi2@uncc.edu UNC Charlotte wants to make sure that all research participants are treated in a fair and respectful manner. Contact the university's Office of Research Compliance at (704) 687-1871 if you have questions about your rights as a study participant.

This research study has been approved by the Institutional Review Board at the University of North Carolina at Charlotte (IRB Study #16-1037). If you would like to participate in this study, click on the link below or paste it into your web browser and you will be directed to the Informed Consent Form. After you review the Informed Consent Form by clicking on the 'Yes' button, you will begin the online survey.

<http://uncc.surveymshare.com/s/AYAQWRD>

Thank you for your consideration and assistance with this study.

Gregory A. Georgiou, LPC
Doctoral Candidate
Department of Counseling

Dr. Susan Furr, Ph.D.
Professor
Department of Counseling

APPENDIX C: INFORMED CONSENT FORM

Dear CACREP Doctoral Student:

As a counseling student, you are being invited to participate in a quantitative research study. The purpose of this study is to examine the program and personal factors that may affect the dissertation self-efficacy of counselor education doctoral students. You are eligible to participate because you are currently a doctoral student in a CACREP-accredited program. Your participation will involve completing a survey.

If you decide to participate, the survey will take approximately ten minutes. The data collected by the investigator will not contain any identifying information so that your participation is anonymous. Any information collected will be kept both anonymous and confidential. To ensure anonymity, survey data will be entered into the computer program using only numerical coding.

The benefits of your participation in this human subject study include contributing to the current knowledge about dissertation self-efficacy in counselor education doctoral students. There are no known risks in participating in this study. You may withdraw or decline without penalty at any time.

Upon completion of the survey, you will have the option to enter your email address into a random drawing to win one of twenty-five \$20.00 Amazon.com gift cards. Participation in the drawing is voluntary as well. Your email address for the drawing will not be linked to your survey responses.

You are a volunteer. The decision to participate in this study is your choice. If you decide to participate in the study, you may change your mind and stop at any time.

UNC Charlotte wants to make sure that you are treated in a fair and respectful manner. Contact the University's Research Compliance Office 704-687-1871 if you have any questions about how you are treated as a study participant. If you have any questions about the project, please contact me, Gregory Georgiou at (704) 502-9368 or my Dissertation Chair, Dr. Susan Furr, on (704) 687-8967.

By clicking the "Accept" button you, you are indicating that you have read the information, consent to participate, and agree that you are currently enrolled as a doctoral student in a CACREP-accredited counseling program.

Thank you for taking the time to participate.

Sincerely,

Gregory A. Georgiou, LPC
Doctoral Candidate
Department of Counseling

Dr. Susan Furr, Ph.D.
Professor
Department of Counseling

APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT
DISSERTATION INVENTORY SURVEY

Counselor Education Dissertation Survey -

Progress 

1) Are you currently enrolled in a CACREP Counselor Education doctoral program?

- Yes
 No

2) Which counselor education doctoral program do you attend?

Select one... ▾

3) Are you an international student?

- Yes
 No

4) Select your enrollment status this academic year

- Full-time
 Part-time

5) What year are you in your doctoral program?

- 1st
 2nd
 3rd
 4th
 5th or greater

6) How many research courses have you completed in your doctoral program? Do not include research classes you are taking in the current semester.

- 0
 1
 2
 3
 4
 5
 6 or more

7) Answer 'Yes' if you have completed the following doctoral program tasks. Answer 'No' if you have not completed them.

| | Yes | No |
|---|--------------------------|--------------------------|
| Have you passed your comprehensive exams? | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you started writing your dissertation? | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you defended your dissertation proposal? | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you successfully defended your dissertation? | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT
DISSERTATION INVENTORY SURVEY – continued

8) DIRECTIONS; Rate how confident you are in your ability to successfully accomplish each of the following tasks. Each task is related to successfully writing a dissertation. Indicate your degree of confidence, from 0 (no confidence at all) to 100 (completely confident). Thank you.

| | | | | | | | | | | |
|-------------------------|----|----|----|----------------------------------|----|----|----|----|----|-------------------------|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| No confidence at all | | | | Moderate amount of confidence | | | | | | Completely confident |

TASKS

| | |
|---|----------------------|
| Select a suitable dissertation topic for study | <input type="text"/> |
| Effectively select the appropriate statistical methodology or qualitative analysis to answer your research question | <input type="text"/> |
| Write the Introduction section for the dissertation proposal | <input type="text"/> |
| Effectively run/apply the appropriate statistical or qualitative analyses to answer your research question | <input type="text"/> |
| Write the Discussion section for the dissertation | <input type="text"/> |
| Collect adequate dissertation data records or field notes | <input type="text"/> |
| Select an appropriate research design for your dissertation | <input type="text"/> |
| In order to effectively write a Review of the Literature, review and synthesize the scholarly literature in your area of study | <input type="text"/> |
| Obtain assistance from other researchers in your topic area | <input type="text"/> |
| Write the Methodology section of the proposal | <input type="text"/> |
| Write the Results section of the dissertation | <input type="text"/> |
| Effectively work with your doctoral committee/chair/mentor for needed help and support | <input type="text"/> |
| Effectively interpret the results obtained from statistical analyses (quantitative) or content analyses (qualitative) | <input type="text"/> |
| Effectively use simple quantitative statistics (eg., frequency distribution, correlation, t-test, etc.) or simple qualitative analysis such as coding | <input type="text"/> |
| Formulate a dissertation research question or statement | <input type="text"/> |
| Operationalize dissertation variables and/or questions | <input type="text"/> |

APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT
DISSERTATION INVENTORY SURVEY – continued

9) These 30 items pertain to your perceptions about your relationship with your advisor. For the purposes of this study, the term advisor is referring to the faculty member that has the greatest responsibility for helping guide you through your graduate program (e.g. advisor, major professor, committee chair, dissertation chair). Please respond to the items using the following scale:

| | 1(Strongly Disagree) | 2 | 3 (Neutral) | 4 | 5 (Strongly Agree) |
|--|-------------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| 1. I get the feeling that my advisor does not like me very much | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. My advisor introduces me to professional activities (E.g. conferences, submitting articles for journal publication) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. I do not want to be like my advisor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. My advisor welcomes my input into our discussions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. My advisor helps me conduct my work within a plan | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. I tend to see things differently from my advisor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. My advisor does not encourage my input into our discussions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. My advisor has invited me to be a responsible collaborator in his/her own work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. I do not want to feel similar to my advisor in the process of conducting work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. My advisor is not kind when commenting about my work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. My advisor helps me establish a timetable for the tasks of my graduate training | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. My advisor and I have different interests | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. I do not feel respected by my advisor in our work together | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. My advisor is available when I need her/him | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. I feel like my advisor expects too much from me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. My advisor offers me encouragement for my accomplishments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. Meetings with my advisor are unproductive | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. I do not think that my advisor believes in me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. My advisor facilitates my professional development through networking | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. My advisor takes my ideas seriously | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 21. My advisor does not help me stay on track in our meetings | <input type="radio"/> |
| 22. I do not think that my advisor has my best interests in mind | <input type="radio"/> |
| 23. I learn from my advisor by watching her/him | <input type="radio"/> |
| 24. I feel uncomfortable working with my advisor | <input type="radio"/> |
| 25. I am an apprentice of my advisor | <input type="radio"/> |

APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT
DISSERTATION INVENTORY SURVEY – continued

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 26. I am often intellectually “lost” during my meetings with my advisor | <input type="radio"/> |
| 27. I consistently implement suggestions made by my advisor | <input type="radio"/> |
| 28. My advisor strives to make program requirements as rewarding as possible | <input type="radio"/> |
| 29. My advisor does not educate me about the process of graduate school | <input type="radio"/> |
| 30. My advisor helps me recognize areas where I can improve | <input type="radio"/> |

10) Review the following list and answer each item that applies to you during your current doctoral program.

| | Yes | No |
|---|--------------------------|--------------------------|
| Death of family member or close friend | <input type="checkbox"/> | <input type="checkbox"/> |
| You have been seriously ill | <input type="checkbox"/> | <input type="checkbox"/> |
| You have experienced an interpersonal breakup | <input type="checkbox"/> | <input type="checkbox"/> |
| Birth of a child for you or your partner | <input type="checkbox"/> | <input type="checkbox"/> |
| Your family member has been seriously ill | <input type="checkbox"/> | <input type="checkbox"/> |

11) If you have received financial support while in your doctoral program, what type of support did you receive? Check all that apply.

- Graduate Assistantship
- Student Loan
- Scholarship/Stipend
- Employer Financial Support
- Veterans Educational Benefits

12) Finances

Enter the average number of hours you have worked in a graduate assistantship per week since beginning your program.

Enter the average number of hours you have worked for pay outside of your doctoral program per week since beginning your program.

APPENDIX D: COUNSELOR EDUCATION DOCTORAL STUDENT
DISSERTATION INVENTORY SURVEY - continued

15)

Mark the place for each item that corresponds to yourself.

| | That's me for sure | That's my tendency | That's not my tendency | That's not me for sure |
|---|-----------------------------|--------------------------|------------------------------|------------------------------------|
| 1. I needlessly delay finishing jobs, even when they're important. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. I postpone starting in on things I don't like to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. When I have a deadline, I wait till the last minute. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. I delay making tough decisions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. I keep putting off improving my work habits. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. I manage to find an excuse for not doing something. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. I put the necessary time into even boring tasks, like studying. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. I am an incurable time waster. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. I'm a time waster now but I can't seem to do anything about it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. When something's too tough to tackle, I believe in postponing it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. I promise myself I'll do something and then drag my feet. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. Whenever I make a plan of action, I follow it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. Even though I hate myself if I don't get started, it doesn't get me going. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. I always finish important jobs with time to spare. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. I get stuck in neutral even though I know how important it is to get started. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. Putting something off until tomorrow is not the way I do it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Finish

Save and Continue Later

APPENDIX E: DISSERTATION SELF-EFFICACY SCALE

Directions: Rate how confident you are in your ability to successfully accomplish each of the following tasks. Each task is related to successfully writing a dissertation. In the space provided to the right of each task, indicate your degree of confidence, from 0 (no confidence at all) to 100 (completely confident). Thank you.

| | | | | | | | | | | |
|---|----|----|----|-----------------------------------|----|----|--------------------------|----|----|---------------------------|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| No confidence at all. | | | | Moderate amount of confidence. | | | Completely confident. | | | |
| TASKS | | | | | | | | | | CONFIDENCE (0-100) |
| 1. Select a suitable dissertation topic for study | | | | | | | | | | _____ |
| 2. Effectively select the appropriate statistical methodology or qualitative analysis to answer your research question | | | | | | | | | | _____ |
| 3. Write the Introduction for the dissertation proposal | | | | | | | | | | _____ |
| 4. Effectively run/apply the appropriate statistical or qualitative analyses to answer your research question | | | | | | | | | | _____ |
| 5. Write the discussion section for the dissertation | | | | | | | | | | _____ |
| 6. Collect adequate dissertation data records or field notes | | | | | | | | | | _____ |
| 7. Select an appropriate research design for your dissertation | | | | | | | | | | _____ |
| 8. In order to effectively write a Review of the Literature, review and synthesize the scholarly literature in your area of study | | | | | | | | | | _____ |
| 9. Obtain assistance from other researchers in your topic area | | | | | | | | | | _____ |
| 10. Write the Methodology section of the proposal | | | | | | | | | | _____ |
| 11. Write the Results section of the dissertation | | | | | | | | | | _____ |
| 12. Effectively work with your doctoral committee/chair/mentor for needed help and support | | | | | | | | | | _____ |

APPENDIX E: DISSERTATION SELF-EFFICACY SCALE – Continued

13. Effectively interpret the results obtained from statistical analyses (quantitative) or content analyses (qualitative) _____
14. Effectively use simple quantitative statistics (e.g., frequency distribution, correlation, t-test, etc.) or simple qualitative analysis such as coding _____
15. Formulate a dissertation research question or statement _____
16. Operationalize dissertation variables and/or questions _____

Copyright © 2003 by Jim Varney. All rights reserved. Used by permission.

APPENDIX F: ADVISORY WORKING ALLIANCE INVENTORY

The Advisory Working Alliance Inventory – Student Version (AWAI-S)

These 30 items pertain to your perceptions about your relationship with your advisor. For the purposes of this study, the term advisor is referring to the faculty member that has the greatest responsibility for helping guide you through your graduate program (e.g. advisor, major professor, committee chair, dissertation chair). Please respond to the items using the following scale:

| | Strongly Disagree | | Neutral | | Strongly Agree |
|--|-------------------|---|---------|---|----------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. I get the feeling that my advisor does <u>not</u> like me very much. | 1 | 2 | 3 | 4 | 5 |
| 2. My advisor introduces me to professional activities (E.g. conferences, submitting articles for journal publication) | 1 | 2 | 3 | 4 | 5 |
| 3. I do <u>not</u> want to be like my advisor. | 1 | 2 | 3 | 4 | 5 |
| 4. My advisor welcomes my input into our discussions. | 1 | 2 | 3 | 4 | 5 |
| 5. My advisor helps me conduct my work within a plan. | 1 | 2 | 3 | 4 | 5 |
| 6. I tend to see things differently from my advisor. | 1 | 2 | 3 | 4 | 5 |
| 7. My advisor does <u>not</u> encourage my input into our discussions. | 1 | 2 | 3 | 4 | 5 |
| 8. My advisor has invited me to be a responsible collaborator in his/her own work. | 1 | 2 | 3 | 4 | 5 |
| 9. I do <u>not</u> want to feel similar to my advisor in the process of conducting work. | 1 | 2 | 3 | 4 | 5 |
| 10. My advisor is <u>not</u> kind when commenting about my work. | 1 | 2 | 3 | 4 | 5 |
| 11. My advisor helps me establish a timetable for the tasks of my graduate training. | 1 | 2 | 3 | 4 | 5 |
| 12. My advisor and I have different interests. | 1 | 2 | 3 | 4 | 5 |
| 13. I do <u>not</u> feel respected by my advisor in our work together. | 1 | 2 | 3 | 4 | 5 |
| 14. My advisor is available when I need her/him. | 1 | 2 | 3 | 4 | 5 |
| 15. I feel like my advisor expects too much from me. | 1 | 2 | 3 | 4 | 5 |
| 16. My advisor offers me encouragement for my accomplishments. | 1 | 2 | 3 | 4 | 5 |
| 17. Meetings with my advisor are unproductive. | 1 | 2 | 3 | 4 | 5 |
| 18. I do <u>not</u> think that my advisor believes in me. | 1 | 2 | 3 | 4 | 5 |
| 19. My advisor facilitates my professional development through networking. | 1 | 2 | 3 | 4 | 5 |
| 20. My advisor takes my ideas seriously. | 1 | 2 | 3 | 4 | 5 |
| 21. My advisor does <u>not</u> help me stay on track in our meetings. | 1 | 2 | 3 | 4 | 5 |
| 22. I do <u>not</u> think that my advisor has my best interests in mind. | 1 | 2 | 3 | 4 | 5 |
| 23. I learn from my advisor by watching her/him. | 1 | 2 | 3 | 4 | 5 |
| 24. I feel uncomfortable working with my advisor. | 1 | 2 | 3 | 4 | 5 |
| 25. I am an apprentice of my advisor. | 1 | 2 | 3 | 4 | 5 |
| 26. I am often intellectually "lost" during my meetings with my advisor. | 1 | 2 | 3 | 4 | 5 |
| 27. I consistently implement suggestions made by my advisor. | 1 | 2 | 3 | 4 | 5 |
| 28. My advisor strives to make program requirements as rewarding as possible. | 1 | 2 | 3 | 4 | 5 |
| 29. My advisor does <u>not</u> educate me about the process of graduate school. | 1 | 2 | 3 | 4 | 5 |
| 30. My advisor helps me recognize areas where I can improve. | 1 | 2 | 3 | 4 | 5 |

APPENDIX G: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT

Multidimensional Scale of Perceived Social Support

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

Circle the "1" if you **Very Strongly Disagree**

Circle the "2" if you **Strongly Disagree**

Circle the "3" if you **Mildly Disagree**

Circle the "4" if you are **Neutral**

Circle the "5" if you **Mildly Agree**

Circle the "6" if you **Strongly Agree**

Circle the "7" if you **Very Strongly Agree**

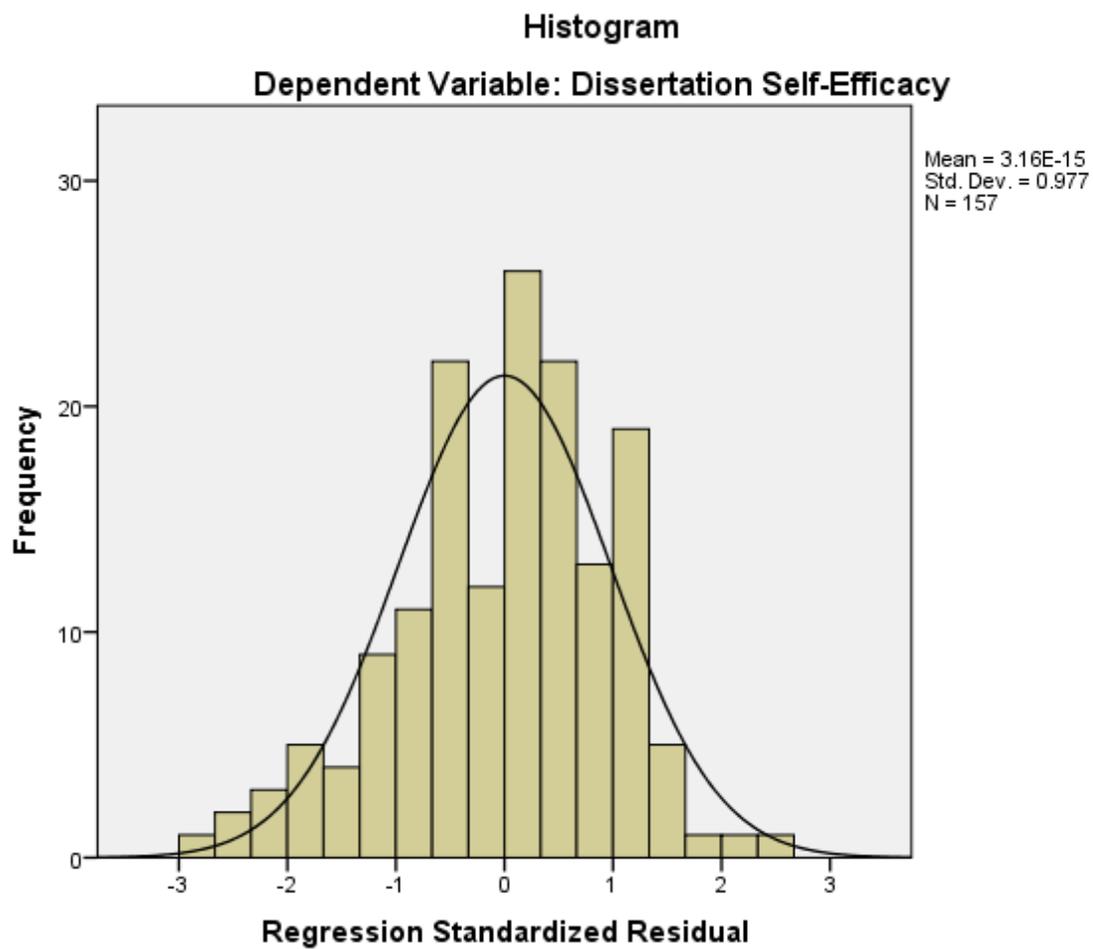
| | Very Strongly Disagree | Strongly Disagree | Mildly Disagree | Neutral | Mildly Agree | Strongly Agree | Very Strongly Agree |
|---|------------------------------|----------------------|--------------------|---------|-----------------|-------------------|---------------------------|
| 1. There is a special person who is around when I am in need. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. There is a special person with whom I can share joys and sorrows. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. My family really tries to help me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I get the emotional help & support I need from my family. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I have a special person who is a real source of comfort to me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. My friends really try to help me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I can count on my friends when things go wrong. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I can talk about my problems with my family. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I have friends with whom I can share my joys and sorrows. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. There is a special person in my life who cares about my feelings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. My family is willing to help me make decisions. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I can talk about my problems with my friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX H: PROCRASTINATION SCALE

Mark the place for each item that corresponds to yourself.

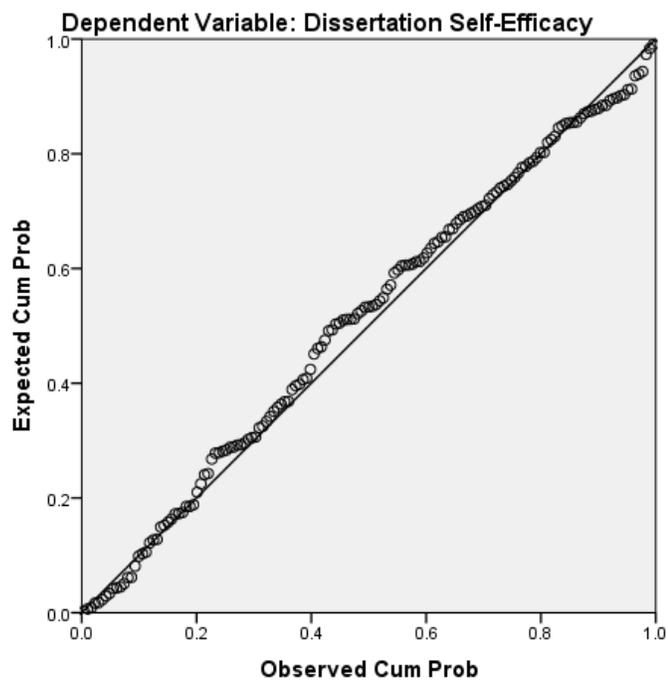
- | | | |
|-----|-------------------------------|---|
| | .-----That's me for sure. | |
| | .-----That's my tendency. | |
| | .-----That's not my tendency. | |
| | .-----That's not me for sure. | |
| | | |
| | v v v v | |
| 1. | ___ ___ ___ ___ | I needlessly delay finishing jobs, even when they're important. |
| 2. | ___ ___ ___ ___ | I postpone starting in on things I don't like to do. |
| 3. | ___ ___ ___ ___ | When I have a deadline, I wait till the last minute. |
| 4. | ___ ___ ___ ___ | I delay making tough decisions. |
| 5. | ___ ___ ___ ___ | I keep putting off improving my work habits. |
| 6. | ___ ___ ___ ___ | I manage to find an excuse for not doing something. |
| 7. | ___ ___ ___ ___ | I put the necessary time into even boring tasks, like studying. |
| 8. | ___ ___ ___ ___ | I am an incurable time waster. |
| 9. | ___ ___ ___ ___ | I'm a time waster now but I can't seem to do anything about it. |
| 10. | ___ ___ ___ ___ | When something's too tough to tackle, I believe in postponing it. |
| 11. | ___ ___ ___ ___ | I promise myself I'll do something and then drag my feet. |
| 12. | ___ ___ ___ ___ | Whenever I make a plan of action, I follow it. |
| 13. | ___ ___ ___ ___ | Even though I hate myself if I don't get started, it doesn't get me going. |
| 14. | ___ ___ ___ ___ | I always finish important jobs with time to spare. |
| 15. | ___ ___ ___ ___ | I get stuck in neutral even though I know how important it is to get started. |
| 16. | ___ ___ ___ ___ | Putting something off until tomorrow is not the way I do it. |

APPENDIX I: REGRESSION STANDARDIZED RESIDUAL

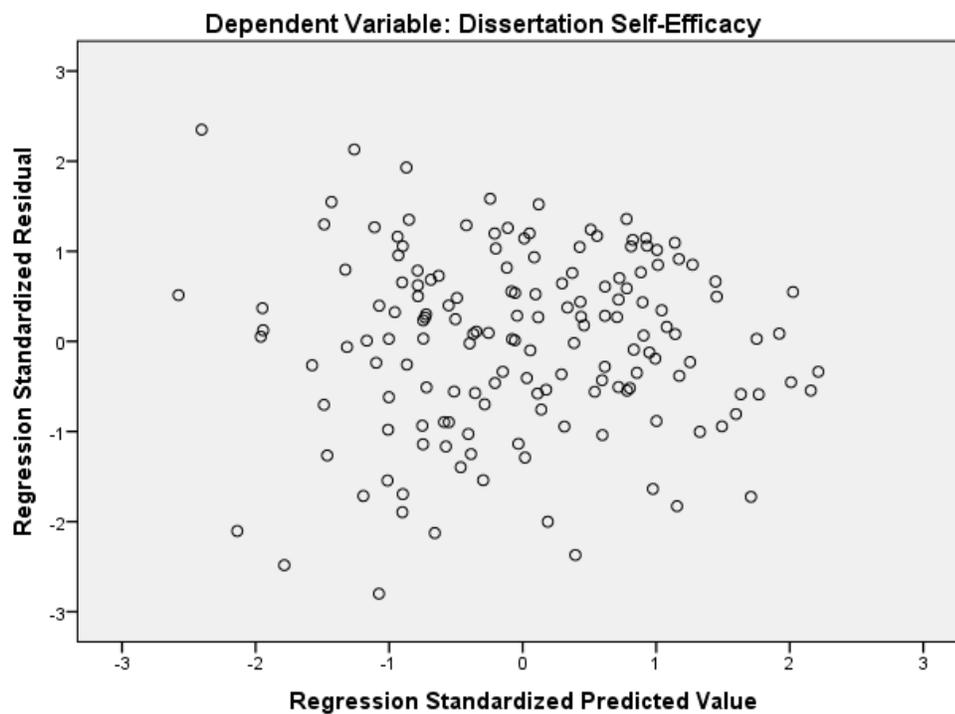


APPENDIX I: REGRESSION STANDARDIZED RESIDUAL (CON'T)

Normal P-P Plot of Regression Standardized Residual



Scatterplot



APPENDIX J: RESIDUAL STATISTICS

| | Minimum | Maximum | Mean | Standard Deviation |
|-------------------------------|----------|----------|-----------|-----------------------|
| Predicted Value | 743.055 | 1473.287 | 1135.881 | 152.433 |
| Std. Predicted Value | -2.577 | 2.213 | .000 | 1.000 |
| Std. Error of Predicted Value | 33.28 | 100.322 | 53.593 | 15.540 |
| Adjusted Predicted Value | 663.336 | 1485.086 | 1135.7879 | 154.181 |
| Residual | -691.849 | 580.661 | .00000 | 241.526 |
| Standard Residual | -2.799 | 2.350 | .000 | .977 |
| Stud. Residual | -2.875 | 2.555 | .000 | 1.006 |
| Deleted Residual | -729.554 | 686.743 | .002 | 256.086 |
| Stud. Deleted Residual | -2.948 | 2.604 | -.001 | 1.014 |
| Mahal. Distance | 1.836 | 24.713 | 6.955 | 5.107 |
| Cook's Distance | .000 | .149 | .008 | .016 |
| Centered Leverage Value | .012 | .158 | .045 | .033 |

Dependent Variable: Dissertation Self-Efficacy Score; $N = 157$

APPENDIX K: CORRELATION MATRIX

Correlations

| | DSES | AWAI-S | Life Stress | Finances | Social Support | Procrastination | Program Climate | Student Class |
|---|-----------------|--------|-------------|----------|----------------|-----------------|-----------------|---------------|
| Pearson | DSES | 1.000 | .342 | .100 | -.080 | .182 | .247 | .246 |
| Correlation | AWAI-S | .342 | 1.000 | .080 | .131 | .081 | .419 | -.101 |
| | Life Stressors | .100 | .080 | 1.000 | .169 | -.113 | -.069 | .228 |
| | Finances | -.080 | .131 | .169 | 1.000 | -.039 | -.106 | -.070 |
| | Social Support | .182 | .081 | -.113 | -.039 | 1.000 | .127 | .190 |
| | Procrastination | .250 | .037 | -.106 | -.106 | .127 | 1.000 | .018 |
| | Program Clim | .247 | .419 | -.069 | -.003 | .190 | .018 | 1.000 |
| | Student Class | .246 | -.101 | .228 | -.070 | .021 | .086 | -.172 |
| | 1.000 | | | | | | | 1.000 |
| Sig. (1-tailed) | DSES | .000 | .106 | .160 | .160 | .011 | .001 | .001 |
| | AWAI-S | .000 | .159 | .051 | .051 | .158 | .322 | .105 |
| | Life Stressors | .106 | .159 | .017 | .017 | .080 | .094 | .002 |
| | Finances | .160 | .051 | .017 | .017 | .313 | .093 | .193 |
| | Social Support | .011 | .158 | .080 | .313 | .056 | .056 | .399 |
| | Procrastination | .001 | .322 | .094 | .093 | .056 | .056 | .412 |
| | Program Clim | .001 | .419 | .069 | .003 | .190 | .018 | .412 |
| | Student Class | .001 | .105 | .228 | .193 | .021 | .086 | .143 |
| Adjusted R ² = .251; N = 157 | | | | | | | | |