STARS

Electronic Theses and Dissertations, 2004-2019

2012

An Investigation Of Master's Level Counselor Education Admissions Criteria: The Predictive Validity Of Undergraduate Achievement And Aptitude On The Attainment Of Counseling Competence.

Emma L. Kendrick
University of Central Florida

STARS Citation

AN INVESTIGATION OF MASTER'S LEVEL COUNSELOR EDUCATION ADMISSIONS
CRITERIA: THE PREDICTIVE VALIDITY OF UNDERGRADUATE ACHIEVEMENT AND
APTITUDE ON THE ATTAINMENT OF COUNSELING COMPETENCE

by

EMMA L. KENDRICK
B.A. Bowling Green State University, 2003
M.A. University of Central Florida, 2008

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the College of Education
at the University of Central Florida
Orlando, Florida

Summer Term
2012

Major Professor: W. Bryce Hagedorn

ABSTRACT

The goal of this research was to examine the relationship between the Graduate Record Examination (GRE) and undergraduate grade point average (UGPA) admissions criteria and the prediction of future counseling competencies in four domain areas; knowledge, counseling skills, professional dispositions, and professional behaviors. The Counselor Preparation Comprehensive Examination (CPCE) provided the measure for knowledge, paired with the Counseling Competencies Scale (CCS), measuring counseling skills, professional dispositions, and professional behaviors. Three types of correlational analyses (Multiple-linear Regression, Pearson Product Moment, and Canonical) were used to test the relationships between the variables and subscales. Overall, significant models were produced in areas consistent with past research: GRE and UGPA scores show a relationship to CPCE scores but not the CCS skills assessment. The author concluded that counselor educators should review their admissions criteria and ensure that the value that they place on the GRE and UGPA criteria is backed by research. Recommendations for future research should focus on the use of alternate admissions criteria which assess applicants for personal characteristics and other qualities considered necessary for a counselor to be successful.

ACKNOWLEDGMENTS

I would like to take this opportunity to express my love and appreciation for those that have been with me throughout this process. I would never have been able to finish my dissertation without the guidance of my committee members, help from friends, and support from my family.

Mom and Dad. Thank you. You raised me right and loved me unconditionally. Because of the lessons you taught me as a child, I have grown into someone that I am proud of. Every day I am thankful for the life I have and I would not have it without you. Making you proud means more than any degree ever could.

To my brother, Ryan. I love you. I wish you all the success and happiness in the world. As children, we never could have imagined where our lives would take us. Looking back on it, I now realize anything is possible. Life is fragile and you make me appreciate the gifts I have. As I begin the next chapter of my life it seems like the only thing missing is you. I hope time changes this. I believe in you.

To my grandparents. For those who are no longer here, I would like to think you are looking down on me with smiles. I think of you often.

To my Nan. I hope I make you as proud as you make me. You are an amazing woman.

To Jessica Smallwood. You are the best friend I have ever had. You have loved me since the beginning, since my "Buckeye Classic" t-shirt days. You always made me feel good enough, just as I am, and because of that I felt the confidence to grow and to take on the

challenges that I have faced. Although things are about to change, I know the important things shared between us never will. I will always be there for you as you have been for me. I love you more than words can say. Thank you for sharing your life with me over these past 13 years. It is no coincidence that these have been the greatest years of my life.

And then there is my committee. I chose you and I never regretted it. Thank you for putting up with me as I know I was not the easiest. This was the most challenging time in my life and I never felt alone. More importantly, I felt like I was supported by some of the most intelligent and caring individuals I have ever met. Specifically, I would like to express my deepest gratitude to my chair, Dr. Bryce Hagedorn, for his excellent guidance, caring ways, and patience. You challenged me to work harder than I ever have before and because of that I am stronger. To Dr. Gulnora Hundley; thank you for inspiring me and reminding me that I can always do more (maybe another degree, maybe teach aerobics??). Dr. Glenn Lambie, thanks for keeping it real. Even though you had to apologize for your "frankness" on occasion, I always benefitted from our conversations, and above all, I knew that you cared. Dr. Kara Ieva, you have encouraged me throughout my entire doctoral career. You have served as a mentor, and now as a friend. I am so happy that our paths crossed when they did, as I now know that was only the beginning of our friendship. Special thanks also goes to Dr. E. H. Robinson, who was willing to participate in my final defense committee at the last moment.

Speaking of intelligent and caring people…to my cohort; I feel lucky to have shared this opportunity with you. Each of you amazed me in your own unique way and I know that I will always look back on our time together with a smile on my face. You guys truly are the best of

the best and I felt proud to be amongst you. I wish you all the luck in the future and I cannot wait to see where your personal and professional lives take you.

To my "stats friends," Dr. Clark and Dr. Xu. Thank you for turning the most challenging part of my dissertation into something that I can feel confident and proud of. You instilled confidence in me and actually made the process enjoyable. That is the sign of a great teacher.

Dallas Wilkes. You have been there throughout this entire process. I am so thankful it was you. I know it will never be like this again, but I am grateful for the time we shared. Thanks for the high-fives, the hugs, the encouragement, the stats help, the shoe game, and for just being you. I've never met anyone like you and am certain I never will. Good luck to you, my friend. You deserve the best and I am excited to see where the future takes you.

Kristina DePue. Just to think of you brings a smile to my face. You truly have the best heart. I have enjoyed our friendship and I know that it will continue in the future. Thank you for your help along this process, especially at the end…I will never be able to hear the words canonical correlation, without thinking of you☺ You have a bright future ahead, and I already feel proud that you will soon be a colleague. Don't let the clinic drive you nuts. I may not be there, but I am only a call away-you know I would love to hear from you.

To my friends…I feel fortunate to say that there are so many of you that I cannot name you all. You know who you are. You are smiling right now because you know this means you. Thank you for being there, for keeping me smiling, and for putting up with my craziness during the tough times. I have a lot to be grateful for in my life but for each of you I cannot say enough of what you mean to me. I am currently surrounded by the best people I have ever known, and while I am about to leave many of you in Orlando, I know we will be friends for life.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE
THE PROBLEM AND THE UNDERLYING FRAMEWORK

In 2004, the then President of the Association of Counselor Education and Supervision (ACES) had the following words for Counselor Educators who were brought together for their annual luncheon at the American Counseling Association:

"We work every day toward that very goal (of healing others)—we have committed ourselves to making a better world. We teach, supervise, counsel, advocate, associate, and liaison in order to ease the hurts of humans. We know [that] too many are wounded, weary, grieving; too [many] are overwhelmed by their distress. So what do we do? We prepare our students and supervisors to practice that special blend of compassion, skills, and knowledge called counseling" (Henderson, 2005, p. 163).

The goal of counselor education programs is to cultivate competent graduates to enter the mental health field and serve the needs of the clients and the profession as a whole (Halinski, 2009). These programs should be receptive to all individuals who possess unique qualities that make one an excellent counselor and should focus their admissions criteria on the empirical research indicating the best methods for selecting candidates suited for the counseling profession. Counselors require a unique set of skills and characteristics, and academic tests, such as the Graduate Record Examination (GRE) or prior grades, such as those indicated by the undergraduate grade point average (UGPA) are not expected to predict these personal qualities (Smaby, Maddux, Richmond, Lepkowski, and Packman, 2005). Bemak, Epp, and Keys (1999) remarked on this issue stating that, "without criteria for character, presentation, or emotional adjustment, graduate programs rely predominantly on academic performance for evaluation,

which by itself, is both inaccurate and misleading in screening the future professionals of a clinically-based discipline" (p. 21). Not only does the selection of applicants based primarily on GRE and UGPA criteria have the potential to eliminate viable candidates who may hold a greater potential for success than their counterparts, but the selection of students who may not be appropriate for the profession increases the likelihood that gatekeeping may become a later issue. Empirical research, then, should be the foundation from which such counselor education programs select their students. A continued reliance and overgeneralization in the use of GRE and UGPA scores may be inhibiting the counseling profession.

It can be said that a flaw in the admissions stage will have a series of negative implications taking place like a chain reaction, affecting students, counselor education training programs, and ultimately future clients. Not only is the potential of students wasted on a career they are not the best fit for, the resources of the institution are also misused on training individuals who do not possess the optimal level of aptitude for the profession (Kuncel & Hezlett, 2007). If gatekeeping procedures are not utilized to intervene in these circumstances, counselor education programs run the risk of graduating these individuals and allowing them to enter the profession, potentially putting clients in harm's way. The responsibility to minimize this risk falls on counselor education programs, as they are seen as the gatekeepers to the counseling profession.

Gatekeeping begins in the admissions stage (Ziomek-Daigle & Christensen, 2010) and involves the screening and selection of the best candidates for the profession. The attractiveness of candidates in counselor education is based on their potential to succeed in the training program and develop the competencies necessary to graduate and perform the duties of a

professional counselor. The use of prediction is often essential during the admission process as counselor educators must select those students who show that special affinity and skill for counseling. During this process, applicants are evaluated by faculty for their suitability for the graduate training program. Program admission criteria vary substantially by institution and program area, but often involve criterion such as: undergraduate degree, undergraduate grade point average, and a standardized test component, such as the Graduate Record Examination (GRE). Additional components frequently include letters of recommendation, writing samples, and interviews (Hagedorn & Nora, 1996).

With the abundance of data on the GRE and UGPA admissions criteria, counselor educators need to ask themselves if they are using the best instruments for selecting students to train for the profession. Halinski (2009) examined the counselor education admission processes, specifically, focusing on the prediction of future competence in counselor trainees. The author questioned the use of these traditional criteria and referred to this process of prediction as an "ambiguous and challenging task" for counselor educators (p.1), encouraging counselor education programs to reconsider the use of traditional criteria, such as the GRE, in the applicant screening process.

The following chapter provides an introduction to the proposed study by discussing the (a) background of the study, (b) statement of the problem, (c) purpose of the study, (d) research hypotheses and research question, and (e) significance of the study.

Background of the Study

Much has been written about the counselor education admissions process. Research focused on the counselor education admissions process and the variables influencing the acquisition of counseling competencies has been conducted for a span of over 50 years (e.g., Bradley & Post, 1991; Gimmestad & Goldsmith, 1973; Harvancik & Golsan, 1986; Jackson-Cherry, 1998: Walton & Sweeney, 1969; Wellman, 1955; Young, 1986). Consistently, these studies produced alarming results, which put into question the value of the GRE and UGPA admissions criteria in counselor education programs. Implications from recent studies show that there is a continued and urgent need for research on the best ways to resolve this issue, as it affects all aspects of the profession.

The GRE and UGPA are common fixtures in counselor education admissions criteria. Hollis and Dodson (2000) examined the use of the GRE and UGPA criteria of 204 counselor education programs in the United States. The research found that approximately two-thirds of the programs required a minimum GPA, and one-third required minimum GRE test scores. The frequency to which these criteria are used lends support to the need for this study as past and current research illustrates a continued reliance on the GRE and UGPA and an overgeneralization of the predictive value of the criterion.

Focus on the admissions process and the GRE and UGPA has produced several noteworthy studies. However, despite the findings, little change in the admissions process appears to have occurred. Markert and Monke (1990) reviewed counselor education admissions processes and concluded that most studies results "generally underscored the inadequacy of traditional selection criteria (i.e., UGPA and GRE) as a means of predicting either counseling

success or academic success" (p. 48).   The authors' main focus on the changes in the admissions process indicated that although there were adjustments in a significant number of programs, the changes to the admissions criterion (GRE and UGPA) predominately focused on cut off numbers, which actually increased the scores needed for applicants, thus increasing the value of the criterion in the admissions process.

Studies have observed the continued use of the GRE and UGPA criteria and the potential value these have in predicting specific areas of development critical to the competency of a counselor. Smaby, Maddux, Richmond, Lepkowski, and Packman (2005) examined the two GRE and UGPA admissions criteria as predictors of a counselor's future knowledge, skill, and overall development and concluded that while the UGPA and GRE Verbal and Quantitative results may be useful in predicting general performance in graduate school and a student's ability to do well on the Counselor Preparation Comprehensive Examination ($R^2 = .352$, $R^2 Adj = .328$, $F(3, 80) = 14.51$, $p < .001$), it was not useful in predicting students counseling performance in clinically based skill areas as measured by two of the three Skilled Counselor Scale subscales (Exploring, Acting, and Understanding); Exploring, $R^2 = .067$, $R^2 Adj = .031$, $F(3, 79) = 1.89$, $p > .05$; Acting, $R^2 = .085$; $R^2 Adj = .05$, $F(3, 79) = 2.44$, $p > .05$.). Similar Schmidt, Homeyer, and Walker's (2009) investigated the validity of the GRE and UGPA admissions criteria in the prediction of knowledge (Multiple regression identified that predictor variables accounted for somewhat limited, yet significant variations in the CPCE-Total scores ($R^2 = .21$), whereas other studies focusing on the criteria's prediction value in the areas of skill development, have continually produced concerning results (e.g.; Smaby et al., 2005; Ray, 2004).

The Educational Testing Service (ETS) revised the GRE test in 2002, replacing the Analytic Reasoning section with the Analytic Writing component. The revision to the GRE was important because past studies had indicated that the third component of the GRE (Analytic section) had been a significant predictor of graduate student's success (as measured by faculty rating and graduate GPA) when compared to the GRE's Verbal and Quantitative scores (Morrow, 1993). Although research continues to be limited on the Analytical component of the GRE, recent studies have expanded to this area of the GRE and showed promising results for the revised component. Specifically, Halinski's (2009) investigation into the use of the revised GRE test in predicting beginning counselor ($N = 95$) success concluded that there was a statistically significant positive correlation between counselor skills assessment ratings and GRE AW scores (r (90) =.314, $p < .01$). The study provided both promising results for the GRE AW and its use in counselor education. Halinski concluded with recommendations for continued research on this component of admissions criterion.

The validity of commonly used admissions criteria has been questioned in other disciplines, such as psychology. Sternberg and Williams (1997) focused their study on the use of GRE results in graduate level psychology programs. The authors made several illuminating concessions regarding their evaluation of the GRE instrument, which can be applied to the present day study on counselor education. First, the authors noted that their examination of the GRE was not geared toward the test itself, but rather how the results of the test were being used in the admissions process. Secondly, consistent with other findings, the authors acknowledged that the test does hold predictive validity for some areas, but not in others. The authors highlighted the importance of the GRE's focus as an analytical measurement, but stated that in

psychology, students must demonstrate analytical, practical, and creative abilities in order to completely develop as a practitioner. The authors concluded the study by stating that programs should use this information to determine if the GRE has value in predicting critical areas of the discipline rather than areas of lesser significance.

If the GRE holds predictive value in areas less significant, or not of the majority of area of needed development, then other assessments must be used in the admissions process to adequately account for the primary areas of prediction specific to that discipline. Applying the aforementioned points to counselor education means that the use of the admissions criteria can be explained in the following terms; the GRE has in fact been shown to have predictive value in the domain areas of knowledge and graduate GPA; however, conclusive research on the usefulness of the instrument ends here for the discipline of counselor education.   Programs should develop more meaningful measurements for the admissions process that screen for critical areas of development (i.e., clinical skills, professional dispositions, and professional behaviors), which are vital for the counselor trainee. Unfortunately, due to a lack of support for the use of alternative measurements during the counselor education admissions process, programs may be forced to rely upon these traditional measures of aptitude and achievement simply because no other valid and reliable measures exist.

In conclusion, the practice of using the GRE and UGPA as central components of the applicant review process continues regardless of evidence that shows these test results do not predict core areas important to the training of counselors. Significant changes to the overall standards of counselor education admissions process have been minimal despite the attention this issue has acquired. The continued reliance on these results is disconcerting: Counselor

educators must understand that this flaw in the system has negative implications throughout the profession from the start of the process.

Statement of the Problem

In counselor education there is a distinct separation between the content knowledge that is needed and the counselors' ability to develop the clinical skills that are necessary to work effectively with clients. Multiple domains are used in the evaluation process, with knowledge being identified as only one domain of expertise that a student must achieve. The positive correlation of the GRE and UGPA with the attainment of knowledge is significant; however the problem arises when counselor education programs rely on this information for vast generalizations in predicting trainees' abilities. In counselor education, the evaluation of counselors is based on several areas of development, commonly grouped into areas representing knowledge, skills, behaviors, and dispositions. This focus differs substantially from other graduate programs where the emphasis is primarily on knowledge. Understanding this critical difference helps one to see how certain admissions criteria can be used for making some predictions about students' abilities to perform in graduate-level coursework, but how it can fail to account for other important areas of academic and emotional development.

In counselor education, the admissions process can be seen as the first opportunity to judge applicants' potential to develop the competencies necessary for the counseling profession (Halinski, 2009). Past research has shown widespread use of the GRE and UGPA criterion in this process, and despite the evidence outlining the limitations of the traditional criteria in counselor education, most programs continue to rely heavily on such results (Markert & Monke,

1990). A potential issue with admissions propels a chain reaction, affecting the student, the training program, and eventually future clients.

In graduate level education, the screening and selection process that occurs during admission can be seen as the starting point in the students training and development. As such, it can be inferred that the possibility of a flaw at this beginning stage would cause a series of negative systemic consequences. It is fair to assume that every graduate program strives to select ideal candidates who are well-suited for the training program while showing great potential to excel in their profession and enrich the field (Sternberg & Williams, 1997). Counselor education programs admit students with the understanding that their duty to train counselors is a complex task, which, dependent upon the student, can take on many forms. Eriksen and McAuliffe (2003) referred to the training of counselors as a "high art" where a student's development of empathy, positive regard, and congruence is essential to accurately connect with clients and make the choices that will positively influence the counseling process. While some students may easily develop the basic skills necessary to build the foundation for their development, other students will require a higher level of supervision as they work toward the acquisition of essential knowledge and skills. Unfortunately there is a potential flaw in the admissions procedures that can be still more detrimental to the profession: It is the small group of students who should not even be admitted to counselor education programs., because, regardless of the amount of training, they do not possess the characteristics necessary to develop the clinical skills for the profession (Halinski, 2009). Additional instruments should be used in the admissions process as the GRE and UGPA do not account for measures of personal characteristics.

When ill-fitted candidates are selected, they potentially take the place of more viable counterparts, who, because of low GRE and UGPA results, were rejected from the program. This increases the chances of training counselors who do not actually have the right personality to counsel, which does a great disservice to the profession. Additionally, this selection of poorly-suited applicants increases the possibility that gatekeeping may later become an issue. Bemak et al., (1999) discussed the potential hazards of training the wrong people for the profession, stating that impaired trainees may use their role as a counselor to incorporate personal agendas "involving dogmatic religious teachings, harmful directive techniques, or antipathy towards members of a different gender, ethnicity, race, sexual orientation, or age-group" (p. 21). It is the responsibility of counselor education programs to use empirical research to develop policies and practices aimed at minimizing the risk of such occurrences. It is evidenced here that the effects of misjudgments at admissions truly reach the client, the negative impact extends further still to the counseling profession.

Continued research on the counselor education admissions process would surely benefit the art of counseling in a myriad of ways. It is the responsibility of counselor education programs to stay current on the research surrounding this topic, because their awareness will directly impact the decisions they make in admitting students for training. Failure to admit quality students to counseling programs ultimately weakens the field (Mobley, Hall, & Crowell, 2010) and has negative effects spanning from the student, to the training program, and finally, to the client.

Purpose of the Study

The proposed research will examine the relationship between entry-level master's students' Graduate Record Examination (GRE) scores and Undergraduate Grade Point Average (UGPA) with the development of the students' competence in the areas of knowledge, skills, behaviors, and dispositions as evidenced by the Counselor Preparatory Comprehensive Examination (CPCE; Center for Credentialing and Education, 2005), and the Counselor Competencies Scale (Swank, Lambie, and & Witta, 2012). The following section provides the reader with an overview of how the proposed study will make an original contribution to the body of knowledge in counselor education.

Specifically, the research examined the separate relationships among traditional admissions criteria of the GRE and UGPA. GRE scores were divided by section (verbal, quantitative, and analytic writing), to provide a more detailed analysis of which component of the GRE admissions criterion holds the greatest predictive value. These measures were compared to student performance on selected program evaluations that include comprehensive exam scores measuring knowledge, and summative evaluations that measure skills, professional behaviors and professional dispositions. Due to factors relating to standardized testing and general correlations in aptitude and achievement, it can be suggested that counseling students at higher levels of aptitude (as measured by the GRE Total score and the GRE Analytic Writing score) and academic achievement (as measured by undergraduate GPA) will score at higher levels of counseling knowledge (as measured by the CPCE). Furthermore, this study investigated the predictive impact of these same aptitude and achievement variables on variables related to

11

counselor competencies, as measured by the Counselor Competencies Scale (CCS), counseling skills, professional behaviors, and professional dispositions.

Another purpose of this study was to help solidify the efficacy of the CCS and validate its use and future value in the field of counselor education. Support for the CCS included an overview of both the quantitative (Swank, 2010) and qualitative studies (Asher, 2011) that have been conducted, in addition to a comprehensive review of the professional standards which are the foundation of the instrument. The research built support for the use of the CCS as both an educational tool, as well as a comprehensive assessment to be used with counselor trainees.

In conclusion, the research contributed to the body of knowledge in counselor education, related to admissions and assessment. The results of this study are intended to inform the reader of the current admissions criteria, and how the criterion's uses are potentially affecting the field. Additional findings lend support for the continued use and development of the CCS.

Significance of the Study

The study is intended to provide empirical evidence for consideration of counselor education programs admissions criterion and counselor assessment. Improvements in student selection can have benefits throughout the counseling field and the community. Furthermore, the use of the CCS instrument has the potential to further validate the instrument and promote its continued development as a beneficial tool in the training and evaluation of counseling students.

Admissions

Kuncel, Hezlett, and Ones (2001) discussed the process of student selection and training in graduate programs, referring to the process as that of "critical importance." The authors

further stated that the admission of a lesser qualified applicant misuses the resources of students, faculty, and schools. This implies that the candidates with the greatest potential to serve clients and uphold the values of the counseling profession may be overlooked. Halinski (2009) encouraged the continuation of research that focuses on improving the admissions process in counselor education programs, stating that efforts should continue "to fine-tune such an ambiguous process involving subjective judgments, ethical responsibilities, accountability pressures, and professional and university standards" (p. 81).

The study hoped to support past research and clearly outline the predictive validity of the GRE and UGPA criterion on those competencies that the field deems most important. As previously stated, the intention of the research was not to discredit the use of the GRE and UGPA admissions criteria; rather, the intention was to highlight the instruments' uses and limitations in counselor education. While the study supported the value of these areas of counselor training, more recent research has continued to express the need for disparate assessments during the admission process-- assessments that identify the personal characteristics that are believed to contribute to counselor effectiveness (or future counselor effectiveness).

Assessment

Previous research was expanded through the researcher's use of the CCS in examining counselor competencies. Although the counselor training assessment was only introduced to the field in 2010, both qualitative and quantitative examinations of the instrument have shown promising results for its use as; a counselor skills assessment, an educational tool, and as a program evaluation instrument. Additionally, this study added to the existing research of Swank (2010) and Ascher (2011), further supporting the validity of the CCS's use as an assessment for

counselors-in-training. Eriksen and McAuliffe (2003) identified counselor education programs as having a responsibility to not only train their counselors, but to assess their trainees and demonstrate that they are cultivating competent counselors. This responsibility is paramount, as it contributes to the teaching and learning process (McKeachie et al, 2006), upholds the standards of the profession, and protects the client's well-being (ACA, 2005:standards F.8.a.& F.8.b.).

The significance of this study extends across disciplines and can be beneficial in helping educators evaluate the use of the GRE and UGPA criterion in their university's admissions procedures. The admissions process is critical for any graduate program as it sets the course for working with the most qualified students chosen to represent that program. In counselor education, the task may be more challenging because the admissions process involves the prediction of a student's ability to develop a specific set of skills that directly affect the mental health of the people they meet and attempt to help (clients). This study gave support to the GRE and UGPA criterion as useful tools in counselor education; however, it is expected that the use will be limited to prediction in the domain area of knowledge, leaving the remaining areas-skills, behaviors, professional dispositions, without predictive measurements.

As the assessment of counselor competence continues to be a point of focus in the field of counselor education, the use of the CCS provided additional support for the assessments use in the evaluation and education of counselors in training. The following section will outline the identified limitation of the study, in addition to the researcher's attempts to minimize the impact of such obstacles.

Research Questions & Hypotheses

The purpose of this study was to determine the predictive nature of the GRE (Quantitative, Verbal, and Analytic Writing Score), and undergraduate GPA on counseling students' knowledge, counseling skills, professional behaviors, and professional dispositions. To examine these relationships, the following research hypothesis and question were examined:

Counselor education students scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) will score at higher levels of counselor knowledge (as measured by the CPCE) and counseling competencies (as measured by CCS) than students at lower levels of aptitude and achievement.

Analysis 1:

Analysis: Multiple linear-regression, Pearson Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variable: CPCE total score

Post-hoc analyses:

Analysis: Canonical Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variables: CPCE scores by subscale (8 items: human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Analysis: Multiple linear-regression

Independent Variables: CPCE scores by section (8) (human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

Analysis 2:

Analysis: Multiple linear-regression, Pearson Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variable: CCS total score (mid-term and final)

Post-hoc analyses:

Analysis: Canonical Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variables: CCS (mid-term and final) scores by section (32 items, identified by three subscales: counseling skills, professional dispositions, and professional behaviors.)

Analysis: Multiple linear-regression

Independent Variables: CCS (mid-term and final) scores by section (32 items, identified by three subscales: counseling skills, professional dispositions, and professional behaviors.)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

In addition to the hypothesis, the following research question will be analyzed to determine if there is a relationship between the CCS and CPCE instruments (mid-term and final). Research Question: What is the relationship between CCS total score and CPCE total scores and between CCS subscale scores and CPCE subscale scores?

Analysis 3:

Analysis: Pearson correlation

Dependent Variable: CPCE total score

Independent Variables: CCS total score

Post-hoc analysis:

Analysis: Canonical correlation

Dependent Variable: CCS scores by section (three subscales; counseling skills, professional dispositions, and professional behaviors.)

Independent Variables: CPCE scores by section (8) (human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

In conclusion, a non-experimental, correlational-research design was used to execute the proposed study's investigation. Specifically, three analyses were used to examine the research question and hypothesis posed by the investigator. A multiple linear-regression (MLR) model

was used to test the predicted relationship between the variables of interest. The results were further examined using a post-hoc analysis, where a canonical correlation and an additional MLR were used to measure the relationships between multiple sets of variables. The research question also incorporated a Canonical correlation and Pearson correlation to determine the relationship between CCS total score and CPCE total scores and between CCS subscale scores and CPCE subscale scores. .

Definition of Terms

Counselor Trainees (also referred to as counselors-in-training) **-** Master's level counseling students at a large, CACREP accredited institution made up the sample population referred to as counselor trainees. Students from three training tracks were included in the sample; mental health counseling, school counseling, and marriage and family therapy.

Entry Scores/Admissions Criterion **-** The admissions process looks similar across many disciplines with applicants being required to submit past academic scores and other items, such as letters of recommendation, resumes, and entry-exam scores, such as the GRE or the Medical College Admission Test (MCAT). In the study, admissions criterions were intended to provide information on two important constructs: achievement, as measured by UGPA, and aptitude, as measured by the GRE.

Achievement (as measured by the UGPA score) **-** Grade point averages are considered a traditional admission criteria, commonly paired with test scores (Mountford, Ehlert, Machell, & Cockrell 2007). The UGPA score is an indicator of the student's academic achievement, and is

consistently found to be a good predictor of future academic success (Kuncel, Crede, & Thomas, 2007; Mountford, Ehlert, Machell, & Cockrell, 2007).

Aptitude (as measured by the GRE) **-** The construct of aptitude was measured by the GRE instrument. The GRE scores are used by many graduate level programs during the admissions process. The GRE is intended to have a predictive value on the likelihood of a student's success in graduate-level course work. Graduate student success is commonly measured in terms of grade point average (GGPA), graduation rates, (Feeley, Williams, & Wise, 2005) and exit examinations.

Counseling Competencies **-** Counseling competencies referred to the set of skills and knowledge required to be a proficient counselor. Professional organizations and scholarly research has generally defined competent counselors as those who possess the relevant knowledge, skills, and attitudes (Kaslow, 2004) conducive to generating the therapeutic alliance, which is considered essential for facilitating change and producing successful client outcomes (Blow, Sprenkle, & Davis, 2007). Competency was also explained by examining the areas of focus on counselor assessment instruments. Assessments such as the Skilled Counselor Scale, Global Rating Scale, Counseling Skills Checklist (Hackney & Cormier, 1994) and Counseling Skills Scale (Eriksen & McAuliffe, 2003) are consistent with the CCS in examining areas focused on building a therapeutic relationship, and facilitating client change. For the purpose of this study counseling competencies consisted of 4 areas: knowledge, skills, behaviors, and dispositions.

Chapter Summary

The use of the GRE and the UGPA as primary selection criterion is a widespread practice in many graduate-level admissions processes. There has been substantial focus on the area of admissions specific to counselor education, with much of the attention focusing specifically on the GRE and UGPA criterion. However, previous research outcomes indicating the limitations to the use of these criteria appears to go on unnoticed, and systemic change has not occurred. This study is a worthwhile endeavor because ultimately, it is the client's well-being and the integrity of the profession which is at stake.

Recent studies have continued to focus on this subject because the trend of using the GRE and UGPA in admissions continues even though research has consistently produced results indicating that these measures alone do not predict future counseling competency (Halinski, 2009). The reason that counselor education programs seem to rely on the GRE and UGPA criterion is brought up time and again in the studies that focus on this topic. First, some of the research has suggested that the admissions criterion of GRE and UGPA for counselor education programs may be useful in some ways, such as the prediction of a student's attainment of knowledge and achievement in the graduate program (Kuncel, Hezlett, & Ones, 2001). However, because this "knowledge" is only one component of a set of well-supported competencies (knowledge, skills, behaviors, and professional dispositions), it can be concluded that other admissions criteria may be needed to assist program faculty in selecting the best students possible, thus introducing the world to well-adapted, responsible individuals who possess the empathy and emotional stability that the profession of counseling needs.

The findings from this study have potential implications that can benefit all aspects of the counseling and counselor education fields. Empirical research was needed to correct the potential flaws in the admissions process and develop new methods to improve the system, increasing the potential of counselor education programs to produce the best counselors to serve in the profession. Additionally, this study added to the existing body of literature related to the relevance of the GRE and UGPA as common criterion in the counselor education admissions process. The GRE Analytic Writing (AW) component was a specific area of focus, as there is no current study that has examined this variable for a relationship with a comprehensive evaluation tool, such as the CCS. Further investigation also contributed to the research base supporting the use of the CCS (University of Central Florida Counselor Education Faculty, 2009). Although the CCS is a relatively new assessment, both Swank (2010) and Asher (2011) have produced results supporting the CCS as a promising instrument for use in counselor education. Other implications included: counselor assessment, the overall training and curriculum approach, student remediation, program performance, program evaluation, and increasing the output of competent counselors from counselor education programs.

Chapter two explored the research related to this topic in counselor education, providing the history and support for the rationale leading to the study. The literature review examined the results of past studies where the criterions of GRE and UGPA have been tested as predictors of counseling knowledge and skills development. While the history of this research extends several decades, it was covered in its entirety with the main points highlighted to show where the gap in research remained.

CHAPTER TWO
REVIEW OF THE LITERATURE

Counselor education programs have the responsibility of training students to enter a highly demanding field. The admissions process can be seen as the starting point for this training. The selection of candidates is of critical importance as this will greatly influence the course of training and the future success of the professional. Graduate programs frequently use standardized test scores and the undergraduate grade point average during the admissions process to predict a student's likelihood of success in graduate school (Hagedorn & Nora, 1996). Research on the use of these criteria in counselor education, however, shows that the criteria only predict a piece of the competencies that are needed for the overall development of a counselor. The continued use of the GRE and UGPA may be hindering the admissions process, resulting in missed opportunities to select the best candidates for training. The future prediction of competence is complex in nature and counselor educators must question if the GRE and UGPA are the best instruments to use in predicting the areas of competencies that are important to counselor development.

The following section is a review of professional counseling literature that is relevant to the counselor education admissions process, counselor effectiveness, counselor assessment, and the vital components of counselor competence. This chapter was divided into sections that will build the rationale behind the proposed study. These sections examined past research on the following topics: 1) general graduate school admissions practices 2) counselor education

admissions practices 3) gatekeeping, 4) counselor competence and assessment, and 5) the Counselor Competencies Scale.

General Graduate School Admissions Policies

The current condition of the United States economy has strained many individuals both personally and professionally. In the opening statements of the 2011 Economic Report, the Chairman of the Committee to the President named some of the main challenges facing citizens. The Chairman described "...stagnant wages, for those who have jobs and high rates of unemployment" (p. 2). Additionally, higher rates and longer spells of unemployment have particularly affected young adults and older workers. With the economy's future hanging in the balance, the pressure is greater than ever for young professionals to remain competitive and reach beyond their own limits to secure a successful career. One way to accomplish this is through the pursuit of higher education and an advanced degree. No longer does a bachelor's degree sufficiently guarantee secure employment. In reality, many bachelor- level graduates are either unemployed or underemployed due to the country's unstable current financial climate.

As the job market becomes increasingly competitive, workers must be able to reach the demands of their chosen field or they risk being left by the wayside. Becker (1993) used the term "human capital" to refer to an individual's assets that make that person desirable to a company. The author identified "education and training" as the most significant investments in a person's human capital, citing previous research that proved a positive correlation between education level and income level.

However, the job market is not the only realm where the stakes are high. In higher education, students must prove their worth even before walking through the door. As individuals

seek ways to expand their skills, many turn to an advanced degree as an option from which they will benefit professionally. These trends increase the number of applications that graduate programs receive. During periods of economic hardship, educational trends in the U.S have shown that many individuals choose to return to school for higher education. This has been shown through the number of graduate school applications and also through increases in the number of individuals taking admissions tests, such as the GRE. In a review of admissions criteria, Fortna (1980) reported that in 1948-1949, following the period of the Great Depression, approximately 50,000 students took the GRE. Wah and Robinson (1990) reviewed the trends from 1987-1988 and found that the number of test takers had increased to over 250,000 annually. In the most recent statistics reported in US News and World Report, Burnsed (2010) reported that in 2010 over 600,000 people took the GRE.

Some programs will have the ability to expand and successfully meet the needs of a larger student body; however, other programs will remain static, yet have the opportunity to select from more applicants. As the amount of applications increases, so does the range of score possibilities. Due to this increase, universities may choose to incorporate "cut-off" scores, where applicants whose scores fall below a certain numbers (i.e. GRE under1000) will not be selected for review beyond the initial stage.

The process of applicant review in education is similar across most graduate-level programs, regardless of discipline. In general, graduate programs require applicants to submit a variety of items along with the official application. These items often consist of undergraduate transcripts, recent scores from a standardized aptitude test, a personal goal statement, and letters of recommendation. Some institutions used a two-tiered system for the application process,

where applicants are also required to participate in an interview or provide additional materials (Hagedorn & Nora, 1996). The initial contact between the admissions committee and the applicant is usually through the application itself, or a brief inquiry on the student's behalf. Once an application is submitted, a university representative reviews the packet and rates the applicant based on the information provided. By current admissions criteria standards, it can be inferred that the first impression of the student is dependent upon the primary application requirement, which often involves the GRE and UGPA criteria. In many programs, "cut-off" scores will be used to propel students to the second stage of application review. Applicants' whose scores fall below a certain level will no longer be considered beyond that stage. While programs generally differ in the application process, it is common that after the initial review, applicants are selected for the next phase, which can involve a face-to-face interview. The constraints of abiding by a limited number of admissions per academic year invite test scores to be a dominant, and perhaps misleading, factor for many of these students. In this elimination round, programs may risk losing worthy candidates who were actually better suited to continue, but were overlooked solely on quantitative information.

Despite the current state of the economy and the overall decline of the job market, the Occupational Outlook Handbook 2008-2018 declares promising predictions for the counseling profession. Employment opportunities for general counseling positions are expected to grow faster than the average profession. Although this projected growth varies by specialty area within the field, job openings are expected to exceed the number of new graduates entering the field, particularly in rural areas (p. 237).

With statistical projections pointing upwards for the future employment of counselors and counseling specialists (marriage and family, addictions, etc.), (Bureau of Labor Statistics, retrieved May 24, 2012), many individuals inclined to social services may be attracted to the profession. As potential applicants research various graduate programs, counselor education offers many advantages for social services-bound applicants. If real growth for the profession is to remain a possibility, counselor education programs must ensure they have the proper resources and screening processes to fairly evaluate all applicants and consider what each one can truly bring into the profession. Hagedorn and Nora (1996) discussed the implications of graduate school admissions from both a student perspective, as well as from a programmatic level. The authors describe how admissions decisions are not only a key component of the student's potential career objectives, but the decisions are also key to the "quality, reputation, and goals of the institution and the department" (Hagedorn & Nora, 1996, p. 31).

Graduate Record Examination

It is widely accepted that the two most common admissions criteria across disciplines are the Graduate Record Examination (GRE) and undergraduate grade point average (UGPA). Kuncel, Hezlett, and Ones (2001) conducted a meta-analysis (N=1,753) on the predictive validity of GRE and UGPA scores on graduate school performance throughout a variety of disciplines. A total of 82,659 graduate students were examined. Results indicated that the two commonly used admissions criteria of GRE and UGPA are "generalizably valid predictors of graduate grade point average, 1st-year graduate grade point average, comprehensive examination scores, publication citation counts, and faculty ratings" (p. 162). However, in discussing the results, the

authors identified several variables that influence the relationship between GRE scores and graduate school performance. The authors first draw attention to the fact that the validity of the GRE assessment varies by discipline and that, while there are similarities across programs in some of the basic tasks of graduate students, there exists many differences in the types of training that is provided. This is perhaps the dilemma with using predictive scores such as the GRE and UGPA in disciplines such as counselor education. While studies have found value behind the admission criterion's ability to predict future success in the domain area of knowledge, research that has focused on the criterion's predictability in the area of skill development has produced inconsistent results (Morrow, 1993; Jackson-Cherry, 1998; Ray 2004; Smaby et al., 2005). This chapter will review current research and build upon the evidence that highlights how the GRE and UGPA can be of value in the counselor education admissions process.

As discussed previously, the GRE is a standard component of many graduate programs' admissions process. Although admissions criteria vary across fields, the GRE is widely regarded in academia as one of the heaviest weighted selection tools of all the criteria used (Ingram, 1983). The GRE is able to measure the construct known as aptitude. The latest version of the test is divided into three sections: verbal, quantitative, and analytical. ETS (2004) developed the GRE instrument and describes its purpose in measuring a portion of individual traits that are important for graduate students to possess. The score on the GRE is assumed to be indicative of the likelihood of a student's success in their graduate-level course work.

The GRE assessment has gone through a series of modifications, with recent changes in areas related to question type and length. On August 1, 2011, ETS officially started using the

latest version of the GRE. This research study is using data that would only include the previous version to the 2011 test. Both versions of the test cover largely the same content in verbal and quantitative abilities, and also tests candidates' problem-solving and analytic writing abilities. According to the ETS, the purpose behind revision of the GRE was to better align itself with the thinking skills that students will need for graduate-level studies.

The verbal component of the GRE is to test the ability of an individual to synthesize written material and recognize relationships between words, sentences, and concepts. According to the ETS, the quantitative component of the GRE "measures problem-solving ability, focusing on basic concepts of arithmetic, algebra, geometry and data analysis." The analytical component of the GRE is described by ETS as a measure of "critical thinking and analytical writing skills." Because it is a writing test and not a multiple choice format, the individual is also tested on his ability to communicate the ideas generated through their critical thinking.

Of the three areas of the GRE, it could be inferred that the quantitative component examining an individual's aptitude in mathematics may be the least useful in counselor education. On the other hand, ETS claims that the verbal and analytic writing components are particularly insightful in assessing the areas important to counseling aptitude.   This chapter will discuss the evidence suggesting that these two subsections of the GRE do in fact have some predictive value in areas of counseling performance. The intention of the research is to provide clear evidence on the specific areas of predictive value, while also examining the areas that are missed by the GRE and UGPA criterion.

Undergraduate Grade Point Average

In addition to the GRE, a common criterion of admissions requirements is the submission of transcripts containing official undergraduate records and grade point averages. The UGPA is intended to provide a measure of past academic achievement. "College GPA is highly correlated with cognitive ability" (Bing, Whanger , Davison, and VanHook, 2004, p. 152) and is typically based on a four-point system. The scale is based on the traditional letter grades, which are common in educational programs throughout the United States. A rating of four indicates a letter grade of "A," three a "B," two a "C," and one a "D." Unlike the GRE, UGPA scores are not standardized and lack reliability when comparing one applicant to another. The low reliability of GPA scores is based on the differences in grading practices, rather than on the calculation method of the scores (Etaugh, Etaugh, and Hurd, 1972).

Achievement is a construct that is measured by the UGPA score, which is intended to provide a summary of the student's undergraduate learning and is generated via the average grade of all classes a student took during undergraduate course work (Kuncel et al., 2007). While many students come from related fields such as psychology or social work, some come from unrelated undergraduate majors. While there are a few core classes across disciplines, students from unrelated majors will have UGPA scores based on coursework that may have little or no relation to the program they are applying. While many graduate programs prefer a related undergraduate major, this is usually not required. Admissions decisions based on cumulative UGPA scores from unrelated undergraduate majors may be adding to the potential weakness in the use of the criteria as there are "...apparent differences in courses taken and course difficulty

across college majors as students' progress through their upper level courses" (Camara & Echternacht, 2000, p. 5) .

Regardless of whether the undergraduate major is related or not, the question remains: Is the measurement of past achievement, as reflected by the UGPA, applicable to a master's level counselor education program? Similarly, does a student's past achievement at an undergraduate level provide enough evidence that they will be successful in counseling, and is the value of this evidence enough on which to base an admissions decision? Looking at the use of the two criteria in the admissions process brings us to a final question: Does *achievement* and *aptitude* predict competence and knowledge/achievement in the areas vital to counseling? The following section will discuss the admissions process in counselor education and will shed light on the use of the GRE and UGPA admissions criteria.

Counselor Education Admissions Practices

It is fair to assume that every graduate program strives to select the best candidates. This can be achieved either through a recruitment process or through filtering out weaker candidates (Sternberg & Williams, 1997). The initial screening and selection of candidates based primarily on GRE and UGPA scores is a common trend for various reasons in counselor education. First, there is currently no single instrument which has shown to be a valid measure of predicting an individual's potential to develop proficient counseling competencies. Second, research suggests that the GRE does positively correlate with such outcome measures as CPCE scores and graduate GPA. The following section will review the past research examining the benefits and limitations of the GRE and UGPA scores in counselor education.

Keppers' (1960) study was one of the first to focus on the admissions practices specifically within counselor education. The study examined the practices of 181 counseling programs and found that virtually all shared common admissions criteria, two of which were GRE scores and the UGPA. A decade later, Gimmestad and Goldsmith's 1973 investigation of counselor education (*N*=100) programs found that the primary admissions selection tool continued to be the GRE, with a rate of 75% using the score in the admissions process. Two decades later, a larger study (*N*=309) conducted by Bradley and Post (1991) examined counselor education programs and identified the continuing trend of the GRE as a common tool in the admissions process.

Due to the frequent use of the GRE and UGPA in counselor education, it is understandable that research interest eventually spread to the criteria's value in predicting success in student counselors. Counselor education programs commonly use exit examinations and skills assessments to ensure that counselor trainees are at the appropriate developmental level suitable for graduation. Researchers have used these outcome measures to examine the admissions scores for a relationship. Two specific areas have emerged as focal points in the examinations of the GRE and UGPA admissions criteria: the attainment of knowledge and the demonstration of clinical skills.

The Prediction of Knowledge

In counselor education there is a distinct separation between the content knowledge that is needed and the counselor's ability to develop clinical skills that are necessary to work effectively with clients. Research has consistently shown that the admissions criteria common to

counselor education programs provide a fairly reliable prediction of the student's likelihood to succeed academically in a graduate program, specifically in content knowledge.

Schmidt, Homeyer, and Walker (2009) investigated (N= 403), UGPA and GRE verbal and quantitative scores in relation to the exit examination known as the CPCE. A series of multiple regressions analyses and Bi-variate Pearson correlations were used to examine the strength of the relationship between the admissions criteria, which includes the UGPA and the GRE verbal and quantitative sub-scales, and the CPCE scores. The analysis revealed that all three admissions variables accounted for significant (although limited) variations in the CPCE-Total scores (R^2 = .21). GRE Verbal scores were found to be the strongest predictor of the CPCE total score and of the eight subsections. The authors concluded that all three admissions variables were valid criteria for predicting the counseling graduate student's success on the CPCE exit examination. These results support the findings of Smaby, Maddux, Richmond, Lepkowski, and Packman (2005) wherein the same three predictor variables (GRE Verbal and Quantitative subscales and UGPA) significantly predicted scores on the CPCE, R^2 = .352, R^2 Adj = .328, $F(3, 80)$ = 14.51, $p < .001$.

As it was concluded that the GRE and UGPA are predictors of graduate school success in academic achievement and test scores, academics in the field became increasingly interested in how these criteria related to the potential for skill development. The following studies utilized varied skills assessments in relation to the GRE and UGPA scores, with findings suggesting that the admissions criteria were not valid predictors of the graduate student's ability to develop the skills necessary in becoming a competent counselor.

The Prediction of Counseling Skills

Ray (2004) described the use of the GRE as "a standard component of graduate admissions in Counselor Education" (Ray, 2004, p. 14) despite finding no relationship between incoming GRE and UGPA scores and student achievement of clinical skills ($N = 47$), as measured through the use of the Global Scale for Rating Helper Responses evaluation tool. Specifically, the results from a T-test analysis found no significant differences between the demonstration of clinical skills in the sample ($N=41$) of practicum students with a GRE score over 1000 (M=2.816, SD=.5058) and those students who scored below 1000 (M=2.607, SD=.3691). There was also no significant relationship found between the UGPA and GSRR ratings (p= 298, r=.158). These results were consistent with a 1998 study conducted by Jackson-Cherry, wherein the GRE and UGPA were examined to see if they are indicative of counseling skill development and graduate school success. Jackson-Cherry used a step-wise procedure to examine a sample ($N=56$) of students in a Communications Skills in Counseling class. The results indicated that the GRE and UGPA were not valid predictors of counseling skills or graduate school success, as measured by the Global Scale for Rating Helper Responses (Gazda, Asbury, Balzer, Childers, & Phelps, 1999) and graduate GPA. A unique finding of the research that later produced a follow-up inquiry was the results of a slight correlation for predicting graduate GPA from GRE AW scores, though the overall model was weak. The correlation between the two scores was found significant at the .10 level. Although no significant findings were found in the AW's prediction of counseling skills, the author noted that it was the highest mean score over the verbal and quantitative sections.

In a later study, Smaby, Maddux, Richmond, Lepkowski, and Packman (2005) examined academic admissions criteria as predictors of a counselor's future knowledge, skill, and overall development ($N = 80$). The verbal and quantitative scores from applicants' GRE and their UGPA results were used to measure the correlations to three evaluation instruments: the Skilled Counselor Scale (Urbani, Smith, Maddux, Smaby, Torres-Riviera, & Cruz, 2002), Counselor Skills Personal Development Rating Form (Wilbur, 1991) and the CPCE (results previously mentioned). Consistent with Morrow (1993), results of the regression analysis found no significance between the predictor variables and the Counselor Skills and Personal Development Rating Form. Note-worthy results were found in a separate analysis using the same predictor variables and the Counselor Skills Personal Development Rating Form outcome variable. A significant model was found between the predictor variables and the SCS total score, $R^2 = .109$, $R^2 \, Adj = .075$, $F(3, 79) = 3.29$, $p < .05$. The researchers used a post-hoc analysis to further examine the predictor variables for a relationship to the sub-scales of the SCS. However, of the predictors, UGPA was the only predictor found related to a SCS sub-scale score, which is linked to understanding. The researchers concluded that while the UGPA and GRE verbal and quantitative scores may be useful in predicting general performance in graduate school and a student's ability to do well on the CPCE, it is not useful in predicting students counseling performance.

Most recently, research has expanded into other areas of examination. Halinski (2009) conducted a study ($N=95$) examining two unique predictor variables: the GRE Analytic Writing sub-scale score and a Sociometric Rating Scale score used during interviews. The study is different from previous research for two main reasons: the GRE Analytic Writing component

and the interview score are seen as actual predictors. Neither predictor has been covered extensively, though recommendations have been made for further research on both the GRE AW and the interview process (Jackson-Cherry, 1998; Leverett-Main, 2004.). In the Halinski study, the dependent variables consisted of two evaluation scores: a Skills Assessment and a Counselor Personality Assessment. Results of the study concluded that GRE AW scores were positively correlated with "mastery" of counseling skills (medium effect size) and the personality assessment ratings (large effect size). Based on the evidence, the author makes recommendations that "...counselor educators may use Counselor Personality Assessment Ratings and GRE AW scores to screen master's applicants by predicting students' abilities to master basic counseling skills early in their counselor preparation" (Halinski, 2009, p. 2). The intention of this study was to expand upon the latter study by further examining the GRE Analytic Writing Assessment (GRE AW). The following section will review the existing literature pertaining to the GRE AW sub-scale and the research that has been conducted on the instrument.

Graduate Record Examination-Analytic Writing Sub-scale

The use of the analytic component in counselor education admissions has been long-standing throughout many schools in the country. Although the GRE analytic section was modified in its most recent update, earlier studies had shown that the analytic section has a potential value in the prediction of student success over the verbal and quantitative subsections. Morrow (1993) made recommendations for the continued research on this component of the GRE after an analysis on the predictive validity of GRE (verbal, quantitative, and analytic

scores) on faculty ratings of counselor (*N*=171) performance. While the results found no significant correlation between the GRE-V and GRE-Q scores and the faculty's rating of the counselor, the GRE-A score was positively correlated (r = .79, p < .01) with the faculty rating. The author also identified the GRE analytic scores as the most powerful predictor of counseling students' success, as measured by the samples graduate GPA scores.

Following Morrow's results, the GRE test was updated to the version used in this study. The analytic section from which Morrow saw promising results became known as the GRE Analytic Writing Examination. The Analytical Writing assessment was first introduced in 1999 as a completely separate test from the GRE verbal and quantitative components. The development of the Analytic Writing examination was a result of the demand by educators for a performance-based assessment of critical reasoning and analytical writing skills. The Analytic Writing test eventually became the third component of the general GRE test, joining the verbal and quantitative sections in 2002 (Rosenfeld, Courtney, Fowels, 2004).

In addition to Halinski's study, further research has shown the potential for the GRE AW in graduate programs, although there was a lack of use of the scores across disciplines (Briihl and Wasieleski, 2007; Jackson-Cherry, 1998). Briihl and Wasieleski (2007) examined the use of the GRE AW in graduate psychology programs (*N*=142) and found that the section was related to success on other measures of academic writing but was valued at a low to medium level of importance in admissions decisions. Furthermore, of the graduate programs surveyed, only 35% reported using the scores in the admissions process.

As stated previously, this study was aimed at adding to the existing research on counselor educations admissions criteria, and specifically the potential value of the Analytic Writing

component. Research has consistently shown predictive value in the area of knowledge, but results are inconclusive in the area of skills prediction. A decision must be made concerning the value of these criteria and the specific areas of counselor success that the individual components of the GRE (Verbal, Quantitative, and Analytic Writing) and UGPA can predict. In addition to the benefits of these criteria, their limitations are equally significant to counselor educators.

The use of the GRE and UGPA scores in counselor education is intended to provide a snapshot of the applicant's past academic achievement (UGPA) while offering a preview for potential future success in graduate school (GRE). Both criteria are used heavily and often determine which applicants will be selected for the next stage and which will not. This method of using the GRE and UGPA scores, however, presents the risk of eliminating applicants who actually possess greater potential to be a counselor than their higher-scoring counterparts. Eliminating viable candidates is only half of the problem- admitting the wrong students who can be a detriment to the profession is the other half. Halinski (2009) sheds light on this side of the admissions process, stating that there is a dual purpose to the process: the selection of "ideal" candidates, and perhaps equally as important, the filtering out of poorly-suited ones. The following section will be dedicated to the process of gatekeeping, a practice that counselor education programs are ethically obligated to use in order to protect the standards of the profession and the community at large (Brear & Dorrian, 2010).   The proceeding information will examine how admissions criteria play a vital role in student selection, and how the GRE and UGPA may possibly be unreliable sources for screening applicants.

Gatekeeping

The prediction of counselor success starts on the first day of the application process and is associated with a common task in counselor education known as "gatekeeping." Gatekeeping has been described as an ongoing process where educational programs in fields such as counseling, psychology and social work enforce a system of quality assurance to ensure that graduates from their programs are competent to provide ethical and effective service to the community at large (Brear, Dorrian, & Luscri, 2008). Counselor educators, assuming the role of gatekeeper, serve to uphold the educational and ethical standards set forth by professional organizations affiliated with counseling and counselor education (Brear & Dorrian, 2010). Understanding the importance of this process should compel counselor educators to take the necessary measures at all stages of the training program, including pre-admission, to ensure that the students they have selected for training will eventually be appropriate to enter and serve the profession.

Homrich (2009) discussed the responsibility of admissions committees in accurately assessing the trainee-profession fit. The author stated that while dimensions of academic ability can be accessed through qualitative instruments, constructs of professional and personal competence present challenges in assessment due to their subjective nature. Counselor educators are tasked with making the initial judgments of applicants based on the limited information they require during the admissions process. While entry-level records, such as the UGPA and GRE, are commonly used to asses an applicant's potential to do well at graduate-level coursework, there is a lack of evidence suggesting that they are good tools in the selection of students who have the potential to develop the complete set of competencies necessary for the counseling

profession. These criteria play a significant role in gatekeeping precisely because of what they *do not* expose.

A lack of screening for areas outside of knowledge overlooks those vital traits necessary to be successful counselors. A greater liability linked to this inadequate screening also means that unfit counselors may also slip through the cracks and gain admission to the program. It can be said that due to the nature of the counseling profession, certain factors may lure unfit candidates searching to fill an emotional void that studying the profession can fill. Foster and McAdams (2009) further explained that a significant number of students in counseling and psychology graduate programs are indicated as having a higher prevalence of serious personality or adjustment problems when compared to the general population. The finding is unnerving when one considers the demands of the profession and the vulnerability of clients.

There are a variety of consequences when the wrong applicants are selected for admission to a master's level counseling program. Ziomek-Daigle and Christensen (2010) conducted a qualitative analysis on gatekeeping practices with eight counselor educators from CACREP accredited universities. The results of their study concluded with the identification of four distinct phases of the gatekeeping process, namely pre-admission, post-admission, remediation plan, and remediation outcome. One result that occurs when admissions criteria fail to adequately screen applicants is the risk for admitting inappropriate candidates for training increases. Not only does this waste the opportunity to select the best students for training, it also implies that gatekeeping systems at later stages of training may have to be used to ensure that the student is adequately prepared to enter the field.

This is where the complexity of the gatekeeping issue greatly increases as a result of the predictive nature of the GRE and UGPA in counselor education. The correlation between the criteria and graduate GPA means that some of the students who will be admitted based on scores will excel in the classroom coursework but may fail in some of the more advanced counselor education courses which are known for requiring more self-reflection focus rather than knowledge-building. This is problematic in counselor education because, while some students may succeed academically, they may fail to develop the skills needed to work with clients, who, after all, should be the priority. Lamadue and Duffey (1999) developed a gatekeeping model for evaluating student counselor competence by explaining that, unlike other graduate programs, counselor education programs must evaluate students beyond academic performance and assess each counselor trainee in terms of "personal qualities, characteristics, and evidence of readiness conducive to effective therapeutic practice" (p. 101). This emphasis on a student's evaluation beyond grades can also be seen from a programmatic level, where CACREP (2009) *Standards* require counselor education programs to conduct ongoing assessment of the students' development throughout the duration of the program, taking into consideration areas beyond grades, in a systematic evaluation of personal and professional development (Section I, P). This area of evaluation beyond grades is delicate in its nature, as evaluations on counseling skills and other dispositions tend to be less objective, yet carry more weight in terms of importance and the level of remediation involved if a deficiency is identified.

The process of evaluating students on the basis of personal characteristics is a complex task for counselor educators, as student remediation and the possibility of student dismissal are potential outcomes. Homrich (2009) explains that the evaluation of personal competencies is

subjective in nature and a lack of defined constructs creates challenges for faculty when dismissal decisions or student remediation plans are based on personal characteristics. Counselor educators take the role of gatekeeper very seriously as legal ramifications are possible when a program decides to remove a student. An example of this can be seen in a 2007 article by McAdams, Foster, and Ward, which was published in Counselor Education and Supervision following the dismissal of a student based on non-academic issues. The student fought the decision of the faculty over the course of three years. The disagreement reached as far as the federal court system and resulted in a jury trial (Foster and McAdams, 2009; McAdams, Foster, & Ward, 2007). Although the trial concluded with the court ruling in favor of the institution, the case led to a heightened awareness of the dilemma counselor educators' face in the role of gatekeeping. The risk of legal challenge educators can endure once a student is admitted and then subsequently removed from a program increases the importance of understanding gatekeeping as a vital component of the admissions process.

The pre-admissions stage in graduate programs is possibly the best opportunity for faculty to screen candidates and determine their qualifications for being accepted into a program of study. When the role of a counseling professional relies on so many factors outside of intelligence, it is difficult to understand why most admissions processes unanimously review applicants solely based on their UGPA and GRE scores and often on an interview. From a gatekeeping perspective, it can be assumed that each of these admissions criteria can be used to evaluate an applicant. The UGPA provides only a glimpse of a student's undergraduate performance. GRE scores provide additional support in evaluating an applicant's knowledge base and likelihood to succeed at a graduate level.

41

During the application process, counselor educators have an opportunity to use instruments to screen candidates on a variety of factors. The current reliance of the GRE and UGPA criteria means that counselor educators are possibly leaving the majority of traits unaccounted for during the admissions process. This reduces the potential for selecting candidates with the most aptitude for the counseling profession while increasing the risk of accepting other students who are possibly unfit to become counselors. It can be inferred that improved strategies for screening applicants would strengthen the gatekeeping practice at pre-admission and avoid future issues by increasing the system's ability to select stronger candidates from the applicant pool. While outcomes such as the graduate GPA and the CPCE may hint at a student's likelihood for future success, it is worthwhile to acknowledge that there are several other crucial pieces to fully assessing applicants. This prediction of future competency must be based on several areas outside of the domain of knowledge. The following section, Counselor Competence and Assessment, will look at the factors most commonly associated with counseling competence and the assessment of these skills. Future research should focus on developing admissions criteria that have the ability to predict areas of counseling performance outside of the knowledge domain.

Counselor Competence and Assessment

Various instruments are available to measure other, more clinically-skilled based areas of counselor competence which are commonly used in combination with knowledge-based assessments, particularly with counselor trainees. This study will incorporate the CCS in combination with the CPCE outcome measure. Using these two assessments will provide a

comprehensive overview of the relationship between GRE and UGPA criteria and counselor development in the areas of knowledge, skills, behaviors, and dispositions.

Assessment is a key component to ensuring that professional counselors are practicing ethically and upholding the standards of the profession. This responsibility extends to counselor educators because of their responsibility to produce effective and ethical counselors. The debate over the best way to assess counselor competency is ongoing within the profession (Eriksen & McAuliffe, 2003). Many tools are being used and evaluated to determine their validity in assessing counselors through a variety of measures. Knowledge-based assessments such as state licensure exam or the CPCE are standardized and receive far more acceptance than skills-based assessments which, by nature, are more subjective and lack consensus among professionals in regards to standards and clearly defined constructs (Homrich, 2009).

Counselor education programs evaluate students in several ways: the evaluation of coursework, a skills evaluations in later stages (such as practicum and/or internship), and comprehensive evaluations which commonly take place as a requirement for graduation. Programs may create examinations specifically for their own use, use standardized examinations, or use a combination of the two in order to evaluate a counselor in all areas of development (Schmidt et al., 2009). Oftentimes this will occur through the use of a knowledge-based assessment and then an assessment measuring actual clinical skills. This two-tier practice of evaluation can be seen in training programs and at state and national licensure requirements where a certain number of clinical hours are required (under supervision) in addition to a passing score on a knowledge-based counseling exam. The aforementioned avenues in which counselor education programs evaluate students serve as the primary indicators that reveal if counselor

education programs are producing competent graduates. Of the many assessments used in

counselor education, the most significant outcome measure is often indicated by a student's

performance on a comprehensive examination (Schmidt et al., 2009). The following section will

examine the Counselor Preparatory Comprehensive Examination, which assesses the domain of

knowledge and the topics considered important to the counseling profession (CCE, n.d., ¶1).

Exit examinations/ Counselor Preparatory Comprehensive Exam (CPCE)

In order for a counseling program to flourish, its students must be well rounded learners,

who can master all the attributes that will propel them toward a successful career in counseling.

Comprehensive examinations offer alternative insight into the likely success of a counseling

student (Schmidt et al., 2009). There is a wealth of diverse knowledge that professionals need

prior to entering the counseling profession. The CPCE measures the construct of knowledge

specific to the practice of counseling (CCE, n.d., ¶1).

The CPCE has eight sub-scales which are based on the eight CACREP (2009) core

curricular areas. These eight sections are regarded by CACREP as "fundamental to the

counseling profession" (CACREP, 2009, p. 58) and are similarly aligned with the National

Counselor Examination that individuals must pass before they can become a National Board

certified counselor (Smaby et al., 2005). The eight sub-scales include the following: human

growth and development, social and cultural foundations, helping relationships, group work,

career and lifestyle development, appraisal, research and program evaluation, and professional

orientation and ethics. The reported reliability of the CPCE-Total score is .87 with a standard

error of measurement of 4.63 (CCE, n.d). Schmidt, Homeyer, and Walker (2009) credit the

test's popularity in counselor education to the fact that it was developed by the Center for

Credentialing in Education (CCE) and is based on the eight CACREP (2009) core curricular areas. The validity in the scores may provide insight as to why the CPCE is so widely used in the field of counselor education. The lack of valid and reliable counseling skills measurements creates a reliance on the knowledge-based assessments which are more objective and allow for longitudinal data to be compared on an individual, programmatic, and national level (Schmidt et al., 2009).

The following section will review the more complex side of counseling assessment and the areas that have been identified as vital to the development of a comprehensive skills evaluation. Research will uncover the ongoing challenges in attempting to evaluate areas of counseling skills under the broad scope of personal and professional development (Swank, 2010). Areas of skill development considered important to counselor educators will be included to build support for the use of the Counselor Competencies Scale in this study.

Clinical Skills Assessments

Clinical skills assessments are a vital component of counselor evaluation and involve the examination of areas critical to the counseling process. In an overview of the history of counseling assessment, Shaw and Dobson (1988) found that assessments vary by format, focus, and rater. Eriksen and McAuliffe (2003) identified the main challenge in the development of a valid assessment instrument as the complexity of the counseling act itself, i.e. client variability, the context of interactions between client and therapist, and the external factors that influence the therapeutic process. However, despite these challenges, some general categories can be seen across the majority of assessments. For the purpose of this study, competence will be defined as

the knowledge, counseling skills, professional dispositions, and professional behaviors necessary to perform the complex duties of a counselor.

Counseling Skills

Hill (2004) classified counseling skills as the responses made by the counselor that assist in developing and maintaining a relationship with the client and facilitating the helping process. A counselor's ability to establish an effective therapeutic relationship is widely accepted as the most important factor related to successful client outcomes (Homrich, 2009; Horvath & Symonds, 1991; Hubble, Duncan, & Miller, 1999; Martin, Garske, & Davis, 2000; Procidano, Busch-Rossnagel, Reznikoff, & Geisinger, 1995; Shirk & Karver, 2003). Counseling Skills are a general category that is usually broken down into subgroups for the purpose of evaluation and training. Students are trained on specific counseling skills in courses like Techniques of Counseling, Group Counseling, and Practicum. The process of teaching these students is often sequential in nature and involves the students reading about specific skills, discussing them in class, observing a demonstration, and then actually practicing the skills. The students' opportunity to practice these skills is often through role-play, where students take turns playing the roles of client and counselor. It is during this training that counselors' developmental approaches are used to assist students in gaining the skills needed to establish a therapeutic relationship with prospective clients (Ivey & Ivey, 2003). Combinations of techniques are used by a counselor to assist a client through the therapeutic process. These counseling techniques have commonly been referred to as "microskills," and are the primary training approach used for assisting counselor trainees in building a beneficial relationship with clients.

46

Research has shown that counseling skills are vital to developing a relationship with clients; however, these skills are only one component important to the success of the therapeutic process. Professional dispositions in counseling are defined by the individual's overall demeanor in a professional setting when fulfilling his/her counseling responsibilities, consistent with the ACA (2005) Code of Ethics and the CACREP (2009) *Standards*. The following section, entitled Professional Dispositions, will discuss the interpersonal characteristics outside of skills that are shown to contribute to the therapeutic relationship and successful client outcomes.

Professional Dispositions

A disposition is an individual's natural tendency or the characteristics that make them well-suited for a given role. In a 2010 study by Stefno, Mann-Feder, and Gazzola, clients were asked to identify the factors they thought were most helpful in their experience with beginning level counselors (*N*=35). Clients identified the counselor's interpersonal qualities and clinical skills as the biggest contributors to their overall experience.

Given that an individual's disposition is naturally occurring, the extent to which this area of skill can be developed may be questionable. In a review of literature, Smith (2004) spanned almost seven decades of research literature and expert opinions on the traits most commonly linked to counselor effectiveness. The results identified hundreds of characteristics researchers compounded into two main categories: cognitive-behavioral and personal-emotional. The author concluded with implications for the field of counselor education, stating that many of the characteristics could not be taught, due to the time constraints of the program and the inherent nature of the characteristic. Ronnestad and Orlinsky (2005) further supported this notion and

47

recommended that candidates selected for counselor education programs "… should have, and experience themselves as having, already well-developed basic interpersonal skills and a warm manner in close personal relationships" (p. 182).

Professional Behaviors

In addition to the knowledge, skills and dispositions that are important to the success of a counselor, there are a set of responsibilities that are required to work in the profession. Counselor educators must evaluate the behaviors associated with professional standards of practice in addition to the clinical skills that are used with clients (Kerl, Garcia, McCullough, and Maxwell, 2002). These behaviors often occur outside of the direct work with clients, but are necessary to meet the legal and ethical standards of the profession. Counselor education programs prepare students for duties such as record keeping and case conceptualization, and the practice of seeking consultation and the assessment of these behaviors is necessary to ensure that counselors are adequately prepared to manage all the responsibilities that will be expected of them. Guidelines for these behaviors can also be seen in CACREP (2009) standards (Section II, B, 1) regarding "professional functioning" (p.10). CACREP refers to these functions under the Professional Orientation and Ethical Standards section and includes specific areas for the training and assessment in counselor education programs. Areas contained under this section include the counselor's: understanding of the counseling philosophy, self-care practices, collaboration with other care providers, professional advocacy and identity, and ethical and legal behaviors.

Counseling Competencies Scale

Graduate-level programs preparing students for the helping profession must demonstrate that graduates possess competencies beyond theoretical and factual content. The evaluation of

students must also account for "personal characteristics, clinical skills, adherence to ethical codes, and professional standards of practice" (Kerl et al., 2002).

The CCS and CPCE instruments will be used in combination to provide a complete measurement of these areas of competence. The CCS was intentionally selected for the purpose of this study because it examines the three clinical skill areas (skills, professional behaviors, and professional dispositions) using 32 sub-scales. These sub-scales are detailed, yet easy to understand, and are directly linked to CACREP standards, which are provided on the instrument.

Using the CACREP (2009) standards as the basis, the CCS was constructed to provide a comprehensive evaluation tool for use with counselors-in-training. The CCS utilizes the three central categories of skills, behaviors, and dispositions to assess the following CACREP standards: counselor characteristics and behaviors that influence helping processes (Section II, Standard 5.b.); essential interviewing and counseling skills (Section II, Standard 5.c.), and self-care strategies appropriate to the counselor role (Section II, Standard 1.d.). In accordance with CACREP guidelines, the CCS is used as a developmental assessment targeting areas of academic performance, professional development, and personal development as central points of evaluation.

Eriksen and McAuliffe (2003) examined the history of counseling assessment and the research that identified a compounded list of five criteria that are needed for the accurate measurement of counseling skills. The CCS instrument meets each of these criterion, being that it is: 1) valid and reliable as initial studies both qualitative and quantitative, show promising results for the CCS 2) based on actual observations of the counselor (CCS evaluation is based on a 20 minute segment of the student counselor in session with a client) 3) easy and efficient for

use with both students and instructors (Ascher, 2011) 4) conducted by expert judges (i.e. instructors- the CCS scores used in this study were all produced by members of faculty at the given university, and 5) qualitative in nature: eight point scale ranging from zero (Harmful) to eight (Exceeds expectations/demonstrates competencies).

The following sections provide an overview of the CCS assessment tool, its uses in counselor education, and a detailed description of the three main categories of the CCS (counseling skills, professional dispositions, and professional behaviors) in addition to their subcategories. Each of the three sections of the CCS was created as a result of an extensive literature review by a team of counselor educators. Each individual item on the CCS is defined and backed by research supporting the inclusion of the area in examination.

The Counselor Competencies Scale (CCS) is an assessment designed to evaluate counseling students' skill development and professional competencies (CCS, 2009). One important quality of the CCS is that it is intended to provide students with direct feedback from their supervisor, offering the students an opportunity for improvement to refine their development as effective and ethical professional counselors. Counseling skills, professional dispositions (dominant qualities), and professional behaviors are each rated through a series of categories, which are described in detail to target the trainee's current level of development.

Counseling Skills

The first of the three factors on the CCS instrument evaluates Counseling Skills. This factor contains three sub-scales: (a) verbal skills, (b) nonverbal skills, and (c) facilitative conditions.

The microskills training approach is the method used to teach counseling skills at the university in examination (Young, 2009) and is considered to be the most effective method for training counselors (Baker and Daniels, 1989).   The specific measurement of the microskills that research has identified as most important to a counselor's ability to build the therapeutic alliance (McKee, Smith, Hayes, Stewart, & Echterling, 1999) are the target of the counseling skills subsection on the CCS. These microskills, identified under the category of counseling skills, include: non-verbal skills, encouragers, questions, reflection, confrontation, goal-setting, focus, and the counselor's overall ability to generate a therapeutic environment (Ray, 2004).

Professional Dispositions

The evaluation of professional dispositions is necessary in order to fully evaluate all aspects of a counselor trainee's competency (Kerl et al., 2002). There are 10 categories included on the CCS within the *professional dispositions* factor: (a) professional ethics, (b) professionalism, (c) self-awareness and self-understanding, (d) emotional stability and self-control, (e) motivation to learn and grow/initiative, (f) multicultural competencies, (g) openness to feedback, (h) professional and personal boundaries, (i) flexibility and adaptability, and (j) congruence and genuineness.

Dispositions in the proposed study are linked to the CACREP (2009) *Standards* regarding (1) Professional Orientation & Ethical Practice, (2) Social & Cultural Diversity, (3) Human Growth & Development and (5) Helping Relationships. "Professional ethics" refers to the ethical guidelines set forth by professional organizations such as: ACA (2009), the American

School Counseling Association (ASCA), and the International Association of Marriage and Family Counselors (IAMFC).

In addition to the guidelines set forth by the professional organizations regarding professionalism and ethical practices, there are other dispositions, based on more personal characteristic that are also evaluated by the CCS. Carl Rogers (1961) referred to characteristics such as empathy, warmth, and genuineness, as "common factors," and there is a substantial literature that supports these elements as vital components to the therapeutic process (Patterson, 1984). The literature on counseling competency also supports characteristics such as self-awareness and emotional stability and flexibility as essential to a counselor's work with clients (Halinski, 2009; Young, 2009; Nagpal and Ritchie, 2002). Finally, areas relating to the need for a counselor's ongoing personal and professional development are accounted for by the subcategories evaluating the counselor: motivation to learn and grow/initiative, multicultural competencies, and openness to feedback.

Professional Behaviors

The goal of counselor education programs focuses on the development of the student into a professional counselor (Ray, 2004). The CCS uses 10 categories in the sub-scale identified as *professional behaviors*. These categories are as follows: (a) attendance and participation, (b) knowledge and adherence to site policies, (c) record keeping and task completion, (d) knowledge of professional literature, (e) application of theory to practice, (f) case conceptualization, (g) seeks consultation, (h) psychosocial and treatment planning, (i) appraisal, and (j) adjunct therapeutic services, termination, and continuity of care. Here again the CCS identifies the related CACREP (2009) *Standard*s and the ACA (2005) Code of Ethics as the basis for the 10

categories on the sub-scale. These standards include: Professional Orientation & Ethical Practice, Human Growth & Development, Helping Relationships, Assessment, and Research & Program Evaluation. These areas have been supported as essential to the overall evaluation of counselors-in-training and are necessary to uphold the ethical and legal standards of the counseling profession (Kerl et al., 2002).

Chapter Summary

The goal of counselor education programs is to train and graduate competent professionals to enter the field and serve the needs of the overall profession. This goal starts at the admission process. Admissions committees are tasked with the selection of students from a growing pool of diverse applicants. Information regarding the student is submitted during the admissions process and this information should paint a picture as to what the applicant has to offer. Counselor educators need to be concerned with this topic and should be asking if using the GRE and UGPA in the admissions process is the best admittance criteria available. Do these measures of *aptitude* and *achievement* substantially and fairly predict students' areas of future development?

The aptitude that counselor educators should be seeking in its applicants should account for all areas considered of importance to a well-rounded counselor. The decision of what graduate admissions criteria to use is a challenge within itself (Hagedorn & Nora, 1996). Counselor educators are aware of the rigors of the graduate program and alternate admissions criteria should seek to select not only the candidates who possess the right blend of qualities necessary for training and further development, but also those who will have the disposition and likelihood to succeed once entering the field (Leverette-Main, 2004).

Research that examines the selection of students with the greatest potential to acquire and implement counseling skills is still needed. Both UGPA and GRE admissions criteria have been consistently used throughout counselor education for many years (Jackson-Cherry, 1998). Smaby et al. (2005) conducted a study and found that GRE and UGPA scores are shown to be fairly valid predictors of graduate grade point average and success on the CPCE, but lack predictive validity when it comes to overall counselor trainee performance ratings. Research lends itself to question the use of these two instruments when making considerations for admission to counselor education programs. While the GRE Verbal and Quantitative components and the UGPA have some predictive qualities on the success of counseling students as measured by the CPCE examination, the GRE AW section is widely underused and may hold potential as the greatest predictor of counseling competencies in the areas of skills, behaviors, and professional dispositions.

CHAPTER THREE
METHODOLOGY

The following chapter contains a detailed description of the research design and

methodology for the investigation. The chapter includes the following sections: (a) Orientation to

the research design, (b) Population, (c) Sample and sampling procedures, (d) Instrumentation, (e)

Variables to be investigated, (f) Research hypothesis and question, (g) Statistical analysis

procedures, (h) Implications and potential contributions to the field, and (i) Chapter summary.

Orientation to Research Design

In order to investigate the relationship between admissions criteria and counselor

development measurements, a non-experimental, correlational-research design was used. A

descriptive-correlational design was used (a) to examine relationships between variables and (b)

to make predictions between the variables in question (Gall, Borg, & Gall, 1996). Quantitative

data was examined to determine the separate and collective contributions of one or more

predictor variables (Graduate Record Examination and undergraduate grade point average) to the

dependent variables (Counseling Competencies Scale and the Counselor Preparation

Comprehensive Examination) using a multiple-linear regression analysis (Halinski, 2009).

Specifically, hierarchical multiple linear-regression was used to test the predicted relationship

between the variables of interest. Hierarchical regression is an intentional process where

predictor variables are selected and entered for analysis based on the researcher's theoretical

understanding (Petrocelli, 2003). For example, due to general correlations in standardized testing, counselor education students' admission GRE scores would theoretically predict their end-of-program counselor knowledge, as measured by their Counselor Preparation Comprehensive Examination (CPCE) scores.

In addition to multiple-linear regression analysis, canonical correlation and Pearson correlation analyses were also incorporated to provide an even more in depth analysis of the variables. Canonical correlation is used when a researcher wants to measure multiple independent and dependent variables at the same time. The results of the canonical analysis provided information on the relationship between the admissions variables and the sub factors on the CPCE and CCS instruments. The Pearson correlation was also used to measure the total scores of the CPCE and CCS instruments.

Population

The study employed a combination of convenience and purposive sampling techniques. The sample is "purposive", in that it was deliberatively selected, rather than randomly selected, in order to obtain a group of students whose records included all of the variables under examination. Teddlie and Yu (2007) described the benefit of purposive sampling, stating that this method enables the variables to be selected for the specific purpose of answering the research question posed. The sample was also considered "convenient" in that the data was easily accessible (Teddlie & Yu, 2007) and preexisting, which was cost effective, "in terms of time, effort and money" (Marshall, 1996, p. 523). The criterion for this study included one group of

students who meet all of the data points necessary to examine the hypothesis and research question.

The population for this study was both men and women who were students in a CACREP accredited master's counseling program between the Fall 2009 and Spring 2012 semesters. Per program admissions requirements, each individual would have had completed an undergraduate degree and competed successfully with other applicants through a admissions process that includes a review of student undergraduate transcripts, UGPA, GRE scores, three letters of recommendation, resume, and written goal statement. After the admissions committee makes an initial review of these application requirements, the applicants who meet minimum criteria (UGPA $\geq$ 3.0, GRE $\geq$ 840) are selected to go on to a formal interview with the program faculty. Interview data was not included in this study because of a lack of a standardization process at the examined university. Future research in this area is needed.

The demographics of the population and the selected participants provided additional support to the research design. The selected participants were also drawn from a population of students attending one of the largest universities in the country. The urban setting where the campus is based consisted of a diverse population of students, ranging in age, ethnicity, and socioeconomic status. In addition to the location of the university, the accreditation (CACREP) of the program from which the sample is selected allows for "increased external generalization of the results (Ray, 2004) due to the standardized nature of CACREP accredited, versus non-accredited, programs. Although the incorporation of convenience sampling limits the external validity of the design, the sample at the university was representative of other programs as evidenced by the demographical information and the similarities across programs. This point

also helps broaden the scope of the results.   Additionally, the participating counselor education program offers master's degrees in school counseling, mental health counseling, and marriage and family therapy with certificate programs in career counseling, play therapy, and marriage and family therapy, all of which the study included data on.

Sample (Sampling Procedures)

At the time of the study there were approximately 281 (as of January 31, 2012) students enrolled in the Master's Counselor Education program, which included all tracks of mental health, school, and marriage and family counseling. Past and current student data was present in both the department database and at the Office of Institutional Research, but the study incorporated only those students whose academic record held all of the variables in examination. In order to increase the probability of obtaining the sample size necessary for meaningful results, the "GPower" program was used. Faul, Erdfelder, Buchner and, Lang (2009) created this statistical analysis program, specifically for use with the social, behavioral, and biomedical sciences. Using an effect size of ($f^2 = 0.15$), an alpha level set at ($p = .05$), and a power level of 0.80 (Cohen, 1988), the minimum sample size to support statistical power would be 119. Taking into account that a combination of variables was used for each test in the multiple-regression data analysis, Cohen further recommends using the number of independent variables to calculate sample size. The admissions criterion consisted of UGPA score, GRE verbal score, GRE quantitative score, and GRE Analytic Writing score, which provided four independent variables. Therefore, the minimum sample size necessary for multiple regression analysis with four dependent variables at $p = .05$, Power = .80, to identify a medium effect size would be 84

(Cohen, 1992). Based on the final sample size ($N = 152$), this study met the requirement of research participants needed for effect size. In order to increase the sample size the researcher selected all students whose records held the variables of interest. The process incorporated several steps which lead to a final sample size of ($N = 152$).

Due to there being two steps in the data collection process (counselor education departmental and Office of Institutional Research) the researcher first sought to obtain as large of a sample as possible from the counselor education departmental database. This was done by the researcher reviewing the database and selecting students whose record held all, or at least the majority of variables. This produced an initial sample of 172 students. Next, the researcher took the selected records with missing variables ($N = 34$) and searched other departmental resources for the missing information. These resources consisted of CPCE records, CCS records, self-reported entry-level scores and demographical information contained on an orientation questionnaire. The author obtained pieces of information to complete 20 of the 34 missing records, reducing the sample again to 158.

Prior to the researcher sending the data to the Office of Institutional Research, the students' personal university identification codes were verified. The process was included to ensure that the records that the OIR were adding would be for the intended participant, and that all data would be linked correctly. The data was input from the OIR and returned to the researcher with 158 records. Upon a final review of the data, six records were removed because the OIR did not have the GRE-AW score on record. This produced a final sample size of 152.

Data Collection

Three instruments (GRE, CCS, and CPCE) were used in the data collection process. The scores from these three instruments, plus the use of the UGPA score, comprise the dependent and independent variables in question. Demographic information contained in the study was obtained from both the departmental database and the Office of Institutional Research database. Departmental demographic information was obtained through survey at the student's orientation to the graduate program. Data was collected from the Fall Semester of 2009 through the Spring Semester of 2012. The fall of 2009 was when the CCS was formally introduced as the primary assessment instrument for the counselors in training at the university. Although the researcher used pre-existing data from students, Institutional Review Board (IRB) approval was gained prior to analysis of data. Due to the study examining entry level scores (UGPA and GRE) in relation to outcome measures (CCS and CPCE), the process of data collection took place over the course of several years, and incorporated two university databases. The Counselor Education program database is managed by one faculty member and included things, such as self-reported, entry-level GRE entry level GRE and UGPA admission scores, demographics, and actual exit examination scores from the CPCE and CCS assessments. In order to reduce the potential of inaccurate data, official UGPA, and GRE Quantitative, GRE Verbal, and GRE Analytic Writing scores were acquired from the university's Office of Institutional Research database. The Office of Institutional Research (OIR) is the organization responsible for research, analysis, planning and assessment for the purpose of program evaluation and development at the university. The UGPA and GRE scores held by the OIR are obtained through reliable sources, rather than by student self-report. The UGPA score is obtained from students' official undergraduate transcript

record and the GRE scores are submitted to the Office of Institutional Research directly from the

ETS testing organization.

Due to Family Educational Rights and Privacy Act (FERPA) regulations and the policy

of the university's Office of Institutional Research, the researcher took several steps to obtain a

full data set for the purpose of research. The sample population was first selected from the

Counselor Education programmatic database based on those students who have all the scores

available. This data was then extracted from the programmatic database and sent as an encrypted

file to the Office of Institutional Research. University identification numbers were then used by

the Office of Institutional Research for each student, to link the OIR data (UGPA, GRE

Quantitative score, GRE Verbal score, and GRE Analytic Writing score) to the dependent

variables of the CCS and CPCE.

Admissions Scores

The Office of Institutional Research then obtained the data set and from the researcher

and entered the official scores for the following variables; UGPA, GRE Quantitative score, GRE

Verbal score, and GRE Analytic Writing score.

The Office of Institutional Research used Enterprise Guide (EG), which is a SAS

(Statistical Analysis System) Business intelligence tool (SAS, 2002), to match the students by

university identification number. The program Peoplesoft was then used to extract the sample's

UGPA, GRE Quantitative score, GRE Verbal score, and GRE Analytic Writing scores. The

researcher also requested that the data include the undergraduate degrees of the sample (although

data was unavailable by majority). The OIR then took one final step and converted the output to

Excel before returning the data file to the researcher. Due to the fact that OIR uses SAS software, not SPSS, the researcher opted to use Excel because it was easier to convert to SPSS. Prior to the full data set being analyzed by the researcher, the identifiers that linked the data from the programmatic database to the Office of Institutional Research data were removed.

Student Outcome Scores

Counseling Competencies Scale (CCS) scores were obtained from the counselor education programmatic database by the lead investigator. The scores from two CCS evaluations were obtained for the sample, even though the researcher initially stated that the outcome variable would be the final score from the student's Practicum one experience. The researcher opted to utilize the scores from the mid-term CCS, in the instance that the final evaluation CCS scores do not produce significant results from the analysis. The researcher felt that this would be understandable, considering scores tend to vary more at the mid-point evaluation, indicating were students need additional focus, and then increase to a common score that puts them in line to pass the course on the final evaluation. While the scores are routinely entered into the departmental database, the researcher had to take an additional step and search through hardcopy records of the CCS in instances where the scores were not provided in the database (as discussed previously in the Sampling Procedures section). The departmental database student records contained multiple CCS scores from each administration. CCS assessments are provided a minimum of six times during a counselor education students' graduate degree for the mental health and marriage and family therapy tracks. In this particular program, school counselors are only required one practicum experience, so those students may only receive four CCS

62

evaluations over the course of their graduate work. The administration of the CCS intentionally occurs at various stages of the student's academic course work to track the student's development throughout the program. The evaluations take place in the following sequence; 1) Introduction to Counseling, 2) Techniques of Counseling, 3) Practicum 1(mid-term), 4) Practicum 1(final evaluation), 5) Practicum 2 (mid-term), and 6) Practicum 2 (final evaluation). The evaluations are used to provide the students' with formative and summative feedback regarding their skills at important benchmarks in the program. Each student record selected by the researcher contained six CCS scores, three domains (counseling skills, professional behaviors, and professional dispositions) from each of the mid-term and final evaluations.

Counselor Preparatory Comprehensive Examination (CPCE)

Students are required to complete the CPCE as part of their exit examination prior to graduation. Each examination is administered by either a department faculty member or doctoral level student, and exams are placed in a sealed envelope and mailed to the CCE for scoring. Results of the CPCE are sent electronically to the institution and include both raw scores and national statistics. The departmental database only held CPCE total scores for each student at the time of the data collection. As part of a graduate assistantship, the researcher was previously involved in the CPCE testing process and had access to all of the scores needed for the sample. This allowed the eight subcategories of the CPCE to be included in the data set for individual analysis purposes. A cut-off score is used at the university to determine those students who pass, and those students who fail the exam and need to retake in order to graduate. In instances where the student took the CPCE more than once, the highest score was used.

Instrumentation

Three data collection instruments will be used in the proposed study: (a) the Graduate Record Examination (GRE), (b) the Counselor Competencies Scale (CCS), and (c) the Counselor Preparation Comprehensive Examination (CPCE).

Admission Scores

Graduate Record Examination (GRE) - The Graduate Record Examination is a norm-referenced, standardized test developed by the Educational Testing Service (ETS, 2004). The latest version of the GRE is divided into three sections; Verbal, Quantitative, and Analytical. The three sections made up three of the four independent variables. Although there is a new version of the GRE, the previous test version will be used, since universities did not officially start using the most recent version until November 2011. Based on the timing of data collection for the sample the new test version would not be included. The ETS (2004) developed the GRE and described its purpose as measuring a portion of individual traits that are important for graduate students to possess. The score on the GRE is typically regarded as an indicator of the likelihood that a person has the ability, or aptitude, to be successful in their graduate level course work.

The verbal component of the test is intended to provide a measure of the individual's ability to comprehend written information and evaluate the concepts as they are communicated through the text. The quantitative component of the GRE involves the test taker answering questions which require math skills, and problem-solving ability (ETS, 2004). The GRE verbal

and quantitative results are each worth 800 points maximum, and are often combined for a total score, with the maximize being 1600.

The second score comes from the Analytic Writing Assessment, which consists of two timed writing components: *Present Your Perspective on an Issue* and *Analyze an Argument* (Halinski, 2009; Rosenfeld et al., 2004). The two tasks are intended to provide a measurement of the individual's critical reasoning and analytical writing skills. The two writing components of the GRE-AW are calculated and provided as a combined score, ranging from 0 to 6, with half-point increments.

Students sometimes retake the GRE and submit multiple test scores for admissions purposes, in order to improve one's chances of getting admitted to a graduate program. For the purpose of this study, the highest scores from the students GRE scores was used.   Because there are two components to the scores, the highest total combined score from the Verbal/Quantitative scores will be used to select the variable. This resulted in the GRE consisting of three dependent variables; Quantitative score, verbal score and Analytic Writing score.

Due to the use of the GRE as a graduate school admissions criteria and applicant screening instrument, many studies focusing on the validity of the GRE use the graduate grade point average to assess the correlation between the selection instrument and a variable measuring academic success (Powers, 2004). Kuncel et al. (2010) conducted a meta-analysis of almost 100 studies and 10,000 students, and found GRE Verbal and GRE Quantitative scores to be valid predictors of graduate GPA scores in both master's and doctoral-level programs. The validity of the GRE has also been verified through a GRE Validity Study Service, provided by Educational Testing Services. The test is examined for relationships with undergraduate grade point average,

65

and first-year graduate grade point average. The three sections of the GRE General Test have validity coefficients around the .20 to .30 range. Reliability of GRE General Test scores reflects internal consistency, using the familiar Kuder-Richardson 20. The reliability of the verbal and quantitative components exceeds .90 and is typically slightly less for the analytic section at .86.

Undergraduate Grade Point Average

The UGPA scores were also used as the fourth independent variable to provide a measure of past achievement. These UGPA scores were initially broken down into three separate categories for the purpose of analysis. Dividing the scores was necessary to ensure that the results would be as concise as possible. The researcher chose to split the UGPA variable based on the data obtained from the Office of Institutional Research. The OIR located UGPA scores for the entire sample that the researcher initially provided when the two datasets were combined. However, when the researcher retrieved the data from the OIR it was explained that the UGPA variable had been split into the following categories; complete UGPA ($N = 41$) and Last 60 hours UGPA ($N = 111$). The OIR explained that the division of scores was because, in earlier years, a GPA for the last 60 hours was computed for all graduate students. However, in recent years, only students with less than 3.0 overall UGPA had a UGPA which only took into account the last 60 hours of their undergraduate coursework. The researcher chose to keep the variables separated for analysis and also included a third variable which combined the two groups. In instances where the students OIR record help both variables, the researcher selected the higher of the two scores. Thus, the final break down of the UGPA variable yielded three groups: 1) all UGPA (combined variables of UGPA and Last 60 UGPA), 2) UGPA (based on complete

undergraduate record), and 3) Last 60 UGPA (based on the last 60 credit hours of a student's undergraduate record). Analyses were run on each of the UGPA groups, resulting in a multitude of analyses. However, due to there being no difference in the outcomes of the separate analyses for each UGPA group, the researcher opted to use the data from the combined UGPA group and only reported those analyses in the results. Additionally, the combined group increased the sample size ($N = 152$), which allowed the researcher to conduct some of the more complex analyses, involving multiple variables.

Similar to the GRE criterion, the use of the UGPA is common in the selection of graduate students (Kuncel et al., 2001). A four point scale is typically used by undergraduate institutions to report student grades, the scale of which is based on the traditional letter grades. Although grade point averages fluctuate in a true value due to the common, yet un-standardized practice of using weighted scores, traditional percentage grades (100 percent maximum) can simply be converted to GPA by dividing the percentage score by 25. Scores in the 90-100th percentile are considered in the "A" range, and correlate between 3.5 and 4.0 on the GPA scale. Subsequently, scores in the 80-90th percentile are considered in the "B" range, and correlate between 2.5 and 3.4 on the GPA scale. Scores in the 70-80th percentile are considered in the "C" range, and correlate between 1.5 and 2.4 on the GPA scale. Scores continue, using the same method, with anything below the 65th percentile typically being considered an "F" or failing grade.

The UGPA scores were obtained from participants' official transcript records. The UGPA score is an indicator of students past academic achievement, and is consistently found to be a valid predictor of future academic success (Kuncel et al., 2007). Validity comes into question, however, for two reasons. First, some academic institutions do not require official undergraduate

transcripts and are left to rely on student's self-reporting of UGPA scores. Kuncel, Crede, and Thomas's (2007) meta-analysis ($N = 60,926$) examined the use of self-reported grades, and cautioned scholars that the construct validity of these measures was not what it was thought to be. Secondly, grade point averages are not standardized scores. Although they are generally based on a four point scale, this is not an official standard in academia.

Student Outcome Scores

Counseling Competencies Scale **-** Two instruments were used as the dependent variables in the proposed research. The first instrument used was the *Counselor Competence Scale* (Swank et al., 2012). The CCS is a 32 item assessment tool designed to be used with counselors-in-training to evaluate their development of three core areas; counseling skills, professional dispositions, and professional behaviors. Raters use five categories to rate students' skills and behaviors: (a) harmful, (b) below expectations, (c) near expectations, (d) meets expectations, and (e) exceeds expectations. Two point increments from zero to eight correspond with each category (i.e. *harmful* is scored a zero, *below expectations* a two, *near expectations* a four, *meets expectations* a six, and *exceeds expectations* an eight.

The 32 individual components and three factors of the CCS were specifically designed to reflect the professional counseling and accreditation organizations (e.g., ACA, CACREP, ACES) best practice standards (Ascher, 2011). These components were also supported through an extensive literature review as items which encompassed the measurement of counseling competency. Detailed descriptions of each of the 32 components and related CACREP standards can be found on the CCS instrument (Appendix A). The main three subsections of

counseling skills, professional dispositions, and professional behaviors are intended to evaluate the student on their development as a practicing clinician. Swank (2010) outlined the three factors contained in the CCS in an investigation into the instruments psychometric properties as the following;

Counseling skills: the combination of skills utilized by the counselor to assist in building and maintaining the therapeutic alliance (e.g., non-verbal skills, reflection, and goal setting).

Professional dispositions: those acts consistent with professionalism when fulfilling one's responsibilities as a counselor (e.g., self-awareness and self-understanding, emotional stability and openness to feedback).

P*rofessional behaviors*: those acts that are consistent with CACREP (2009) and ACA (2005) *Code of Ethics* (e.g., record keeping, consultation, and case conceptualization).

The CCS evaluation is used in multiple ways, providing valuable information to the student, the supervisor, and the program as an educational tool, an assessment, and a program evaluation device. Although the administration of the CCS can take place in various forms, including live supervision and by review, the guidelines for using the instrument at the formal evaluation stages during the program state that the administration should be based on a 20 minute segment of a counseling session with a client. The segment should be used to complete the section of the CCS focused on the assessment of counseling skills. Professional dispositions and professional behaviors are evaluated by the rater based on supervisor's experiences with the student over the period of evaluation.

Although the CCS is administered several times throughout the duration of the graduate program, the scores from students' second administration of the CCS (done during their

Practicum 1 course) will be used. The administration of the CCS in the Practicum 1 course is significant as this is students' first opportunity for a skills assessment using actual clients. Using this CCS score is also important because a) most universities only have one Practicum course and b) all students at the given university will complete at least one semester of practicum.

The ratings of the CCS were conducted by members of faculty who were the designated instructor to the student. The department offers trainings on the CCS to all instructors on a regular basis. In addition to the training, a DVD and instruction manual are available to assist with the administration of the evaluation and interpretation of results. Additionally, specific guidelines for using the tool are contained on the cover page of the instrument for quick reference during the administration.

Initial reports on the psychometrics of the CCS show the instruments potential as a valid measure of a counselor trainee's development in the areas of skills, professional behaviors, and professional dispositions (Swank, 2010).   An exploratory factor analysis (EFA) of the CCS identified a number of areas, showing moderate to high values for several the CCS's psychometric properties (Swank, 2010). Results from the analysis found high internal consistency throughout the three factors (Cronbach's alpha = .942 (counseling skills), .896 (professional dispositions), and .921 (professional behaviors). Moderate levels of interrater reliability were also found across each of the three factors when examined separately (Skills, $r =$ .436; Dispositions, $r = .515$; and Behaviors, $r = .467$) and as a combined total (Total, $r = .570$). Another important finding from Swank's investigation was that of a moderate correlation for criterion related validity ($r = .407$) between CCS total score and counseling students' final grade in the course (Swank, 2010).

Ascher (2011) provided additional support to Swank's 2010 findings, identifying promising results through a qualitative analysis of the CCS. Ascher examined counseling students' and practicum supervisors' "lived experiences" with the CCS through a descriptive, exploratory phenomenological study. Ascher's goal was to extend Swank's study on the psychometric properties of the CCS and examine the "perceptions, purposes, and uses of the CCS" (p. iii) from perspectives of both the student and the instructor.

Ascher's (2011) sample included counseling practicum students ($N = 23$) and practicum supervisors ($N = 6$) from a large CACREP accredited counselor education program in the Southeast. Individual interviews and focus groups were utilized, which led to the identification of five themes within the data: (a) Cognitive understanding, (b) Emotional Understanding, (c) Feedback, (d) Trustworthiness, and (e) Gatekeeping. The qualitative data obtained from the verbal statements of the students and supervisors showed that the two groups agreed that the CCS was a useful and comprehensive evaluation tool to be used with counselors-in-training. Equally as valuable, Ascher's study identified limitations to the CCS, which provide areas for future research and development of the instrument. Limitations included; inconsistent administration and scoring issues, the cut-off system for determining passing versus failing scores, and overall concerns about the raters use of the tool, in terms of accuracy and effort put forth in the correct administration of the CCS (Ascher, 2011).

There have been several notable improvements to the CCS since the instrument's introduction as the primary skills assessment for the counselor education program. The CCS is the product of years of research and a extensive literature review by a team of researchers at the university where the instrument was developed. The development of the instrument took place

71

over several years and was focused on the researchers concern for creating a psychometrically sound instrument. In 2004 the faculty introduced the *Counselor Skills and Professional Behavior Scale* (CSPBS; University Counselor Education Faculty). This instrument was used for a short time to evaluate its effectiveness and accuracy as an evaluation instrument. Following the trial period, the CSPBS was determined to need modification as the development team of researchers had concerns over the scoring system used on the evaluation, in addition to the operational definitions of the instruments subscales. The review process of the CSPBS was extensive and was centralized on increasing content validity of the instrument through improvements to the definitions of the competencies and the measurement used to evaluate these areas. Upon completion of the revisions to the instrument, the CSPBS was re-released under the new name of the Counseling Competencies Scale.

Counselor Preparatory Comprehensive Exam

The *Counselor Preparatory Comprehensive Exam* (CCE, 2006) test score will be used as the second dependent variable to be examined in the proposed research design. The CPCE measures the construct of knowledge, specific to the practice of counseling. The CPCE has eight subscales which are based on the eight CACREP (2009) core curricular areas. The eight subscales include: (a) human growth and development, (b) social and cultural foundations, (c) helping relationships, (d) group work, (e) career and lifestyle development, (f) appraisal, (g) research and program evaluation, and (h) professional orientation and ethics. The CPCE consists of 160 multiple-choice items, with 20 items for each of the eight areas. Cates, Schaefle, Smaby, Maddux, and LaBeauf (2007) conducted research using the CPCE and explain how the

maximum score of 136 is produced by each of the eight sections having 20, multiple-choice questions, with only 17 being scored and three used as experimental questions. The authors remark that "Higher scores in each domain and overall reflect more knowledge by the counselor" (p. 30).

The CCE reports the reliability and validity for the CPCE instrument (CCE, 2006). The Kuder- Richardson 21 analysis indicates a moderate level of internal consistency for the instrument 136 scored items. The standard deviation is reported at 4.63. Information on the validity of the CPCE is limited to content validity, but these measurements fall within the CACREP guidelines. Reliability of the CPCE total score is measured at .87 (CCE. n.d.).

At the site where the study was conducted, the administration of the CPCE is administered by either a program faculty member or doctoral level student. Examinations typically occur three times a year, in the Fall, Spring, and Summer semesters. Examination results are processed by the Center for Credentialing and Education (CCE. n.d.). Total score and subject scores are used to evaluate individual areas and overall knowledge of students. As the CPCE is a graduation requirement, at the university where the study is being conducted, a score of "80 +/-" the standard error of the mean has been set as the passing score. Table 1 represents the national CPCE statistics from 2012 ($N = 1224$, $M = 94.14$, $SD = 13.43$). Per departmental policy, students who do not obtain a passing score must retake and pass the exam prior to graduating. The initial score for each member in the sample was used in the study.

Table 1: National Descriptive Statistics

Content Area	N	Minimum	Maximum	Mean	Std. Dev.
Human Growth and Development	1224	5	17	12.33	2.44
Social & Cultural Foundations	1224	4	16	11.1	2.26
Helping Relationships	1224	3	17	12.14	2.39
Group Work	1224	3	17	12.02	2.49
Career & Life Development	1224	3	17	11.6	2.34
Appraisal	1224	4	17	10.48	2.23
Research & Program Evaluation	1224	2	17	11.82	2.61
Professional Orientation & Ethics	1224	4	17	12.66	2.24
Total	**1224**	**40**	**124**	**94.14**	**13.43**

Research Hypothesis and Question

The purpose of this study was to determine the predictive nature of the GRE (Quantitative, Verbal, and Analytic Writing Score), and undergraduate GPA on counseling students' knowledge, counseling skills, professional behaviors, and professional dispositions. To examine these relationships, the following research hypothesis and question were be examined:

Research Hypothesis

Counselor education students scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) will score at higher levels of counselor knowledge (as measured by the CPCE) and counseling competencies (as measured by CCS) than students at lower levels of aptitude and achievement.

Analysis 1:

Analysis: Multiple linear-regression, Pearson Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variable: CPCE total score

<u>Post-hoc analyses:</u>

Analysis: Canonical Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variables: CPCE scores by subscale (8 items: human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Analysis: Multiple linear-regression

Independent Variables: CPCE scores by section (8) (human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

Analysis 2:

Analysis: Multiple linear-regression, Pearson Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variable: CCS total score (mid-term and final)

Post-hoc analyses:

Analysis: Canonical Correlation

Independent Variable: (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA).

Dependent Variables: CCS (mid-term and final) scores by section (three subscales: counseling skills, professional dispositions, and professional behaviors.)

Analysis: Multiple linear-regression

Independent Variables: CCS (mid-term and final) scores by section (three subscales: counseling skills, professional dispositions, and professional behaviors.)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

In addition to the hypothesis, the following research question was analyzed to determine if there was a relationship between the CCS and CPCE instruments (mid-term and final).

Research Question

What is the relationship between CCS total score and CPCE total scores and between CCS subscale scores and CPCE subscale scores?

Analysis 3:

Analysis: Pearson correlation

Dependent Variable: CPCE total score

Independent Variables: CCS total score

Post-hoc analysis:

Analysis: Canonical correlation

Dependent Variable: CCS scores by section (three subscales; counseling skills, professional dispositions, and professional behaviors.)

Independent Variables: CPCE scores by section (8) (human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Statistical Analysis Procedures

Three types of statistical analyses were conducted in order for the researcher to examine the research question and hypothesis. A multiple linear-regression (MLR) model, in addition to a canonical correlation analysis and a Pearson correlation will be used to analyze the data.   This type of analysis was needed due to the predictive nature of the study and the researcher's use of more than two independent and dependent variables (CPCE; eight factors, CCS; three factors). All statistical tests of significance were conducted with an alpha level of .05.

A multiple linear-regression analysis was required to examine the data because multiple independent variables were being examined for a relationship to the dependent variable. Aiken,

77

West and Pitts (2003) described MLR as a flexible system for examining the relationship of a collection of predictor variables (quantitative of categorical) to a single dependent variable. This analysis was used to test the predictor admissions criterion for a relationship to a single outcome or dependent score (such as the CPCE total score or the CCS mid-term or final total score). Canonical correlations, on the other hand, allow the researcher to examine multiple independent and dependent variables for their relationship. Canonical correlation was selected over the more well-known analysis, structural equation modeling (SEM), because CCA is intended to examine the relationship between the variables and the variable sets, whereas SEM focuses on the overall model (Guarino, 2004). Hardoon, Szedmak, and Shawe-Taylor (2004) described Canonical Correlation Analysis (CCA) as "a method of correlating linear relationships between two multidimensional variables" (p. 1). Canonical correlation was used to examine the relationship between the sub factors of the predictor admissions variables and the outcome variable sub-factors.

In CCA, the two groups of variables are examined through a procedure similar to a Pearson Correlation analysis. Sherry and Henson (2005) explain that in CCA, each group of variables is reduced to one "synthetic variable" based on the relationships between the variables within the group. This process produces one synthetic predictor variable and one synthetic criterion variable. The relationship between these two variables is the same as the Pearson "r," but is recognized in CCA as the canonical correlation coefficient. In canonical correlation the significance of the full model is most commonly determined by the Wilks-lambda coefficient which is produced through a Multivariate Test of Significance. In order to further evaluate the model for each canonical function, or "root," the output list must be examined to determine

variance between the variable sets. The researcher should only be concerned with those roots that account for a reasonable amount of variance in relation to the variable set.

The final type of analysis was used to examine the outcome measures for a possible relationship. Pearson correlations were used to quantify the strength of the relationship between the CCS and CPCE exit examination total scores (Graziano & Raulin, 2000). The following sections outline the three analyses, with a listing of the independent and dependent variables examined by the researcher.

Analyses One & Two

To begin the examination of the hypothesis, a MLR analysis was first conducted to determine whether the independent variables (GRE Verbal and Quantitative total test score, GRE Verbal and Quantitative individual test scores, GRE Analytic Writing score, and undergraduate GPA) could predict scores on the CPCE and CCS assessments (total scores).   A Pearson correlation analysis was also used to measure the strength of the association between the variables. A post hoc analysis using canonical correlation was also used to examine the relationships between the four predictor variables and the CPCE (Human Growth, Social and Cultural Foundations, Helping Relationships, Group Work, Career Development, Appraisal, Research, Professional Orientation) and CCS (clinical skills, professional dispositions, professional behaviors) subscale scores (midterm and final). This method was selected so that the separate and collective contributions of the independent variables to the dependent variables could be examined extensively. In addition to the post hoc canonical correlation, separate multiple regressions were also conducted to identify any relationships between the subject areas

of the GRE and the UGPA criterion, and the individual subject areas of both the CPCE and CCS (mid-term and final).

Analysis Three

An additional analysis of the CCS and CPCE variables was also included in the study. The dependent variables were examined to determine if the CCS total score can be used to predict performance the total score on the CPCE exit examination. Separate analyses were also conducted to examine the predictive ability of the CCS subscales (3) on each on the eight CPCE subscales (8). The inclusion of this analysis served to further validate the CCS instrument. Another Pearson correlation analysis was also used to examine the relationship between the CCS and CPCE exit examination total scores. A post hoc canonical correlation was also used to evaluate the CPCE (8) and CCS (3) subscales**.**

Conclusion

This chapter provided additional justification for the proposed research, while outlining the methodology of the research design. Details such as the statement of the problem, sampling and data collection procedures, definition of variables, instrumentation description, and an overview of the statistical procedures per hypothesis, were discussed at length. The data analyses and findings will be presented in Chapter Four.

CHAPTER FOUR
RESULTS

This study examined the relationship between the Graduate Record Examination (GRE) and undergraduate grade point average (UGPA) admissions criteria and the prediction of future counseling competencies in four domain areas; knowledge, counseling skills, professional dispositions, and professional behaviors (as measured through the CCS and CPCE instruments). The use of these two admissions criteria has been an ongoing trend throughout counselor education graduate programs for decades. The common use of the instruments has continued despite the attention it has received questioning the value it has in predicting an applicant's overall success in a counselor training program.

The Statistical Package for the Social Sciences (SPSS) was used to examine the data obtained from the sample of counselors-in-training. The following chapter provides a description of the statistical procedures and results of each analysis. The demographics of the sample are also described in the following section, followed by a review of the research questions and hypotheses, and related statistical findings. All research questions and hypotheses were tested at a .05 level. Prior to data analysis, the researcher screened the sample for missing data and outliers, and checked for normality and linearity levels. Once all statistical assumptions were met, the researcher proceeded with the data analysis. The decision to utilize a multiple regression model was based on the researchers desire to evaluate and establish a quantitative relationships between multiple dependent and independent variables.

Descriptive Characteristics of Sample

The sample population consisted of 152 graduate students in a counselor education program at a large urban university located in the southeast. Of the sample, there were 26 males and 126 females. Table 2 shows the ages of the sample with 128 individuals in the 20-29 group, 21 individuals in the 30-39 group, and 3 individuals in the 40-49 group. There were zero individuals identified in the 50 and over group.

Table 2: Age Distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
20-29 years of age	128	84.2	84.2	84.2
30-39 years of age	21	13.8	13.8	98.0
40-49 years of age	3	2.0	2.0	100.0
Total	152	100.0	100.0	

The semester that the individuals began the program was also computed; the results included a sample of students, with entry semesters ranging from before the Fall of 2004-2005, all the way until the Summer of 2010. Frequency scores from this analysis indicated that over 75% of the sample started between the Fall of 2008-2009 semester and the Spring 2009-2010 semester. Table 3 shows that of the three possible counseling specialty tracks there were 66 mental health students, 47 school counseling students, and 39 marriage and family students.

Table 3: Track Distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Mental Health	66	43.4	43.4	43.4
Marriage and Family	39	25.7	25.7	69.1
School Counseling	47	30.9	30.9	100.0
Total	152	100.0	100.0	

Additionally minority status data (Table 4) resulted in the sample being further identified as consisting of 109 white or Caucasian individuals, and 43 individuals identifying under the "Black or African American/Hispanic/Asian/Other" category.

Table 4: Ethnicity Distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
White/Caucasian	109	71.7	71.7	71.7
Black/African American/Hispanic/Asian/Other	43	28.3	28.3	100.0
Total	152	100.0	100.0	

Undergraduate major was also identified with the majority of students (102) coming from a psychology background (Table 5).

Table 5: Degree Distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Psychology	102	67.1	67.1	67.1
Social Work	2	1.3	1.3	68.4
Elementary Education	6	3.9	3.9	72.4
Exceptional Education	2	1.3	1.3	73.7
Sociology	3	2.0	2.0	75.7
Other	30	19.7	19.7	95.4
Unknown	7	4.6	4.6	100.0
Total	152	100.0	100.0	

Table 6 shows the frequency data for the independent variables GRE Verbal, GRE Quantitative, GRE Analytical writing, and UGPA scores. The researcher included self-reported admissions scores in addition to the verified admissions scores, from the Office of Institutional Research (OIR). Data was included so that the researcher could include any differences found between the self-report scores and the verified scores. UGPA scores were not only verified by the OIR, the scores were further split into two separate categories based on the university's policy for collecting admissions criteria. This resulted in one category for an "overall" UGPA score ($N = 41$), consisting of a grade point average from students' entire undergraduate record, and a second UGPA category, which only included a GPA from the last 60 hours of students' undergraduate coursework ($N = 111$). The UGPA categories were later combined back into one variable ($N = 152$) due to the results of the analyses identifying no difference between the separated or combined UGPA variables in either demographic or correlational analyses. The combined UGPA category also allowed the researcher to analyze data based on a larger sample.

84

Table 6: Frequency Data

Variable	N	Minimum	Maximum	Mean	Std. Dev.
GRE-Verbal	152	300	660	450.07	78.576
GRE Quantitative	152	290	800	530.72	100.805
GRE-Analytical Writing	152	.5	5.5	3.961	.7336
GRE total score	152	610	1410	980.79	149.208
GRE self-report Total Verbal-Quant.	152	610	1410	985.46	149.200
UGPA (OIR)	41	2.3	3.9	3.259	.4026
UGPA last 60 (OIR)	111	2.3	4.0	3.375	.3860
UGPA self- reported score	152	2.3	4.0	3.389	.3747

Table 7 reports the frequency data for the dependent variables for the CCS and CPCE scores. Outcome data on the CCS was included for both the mid-term and the final evaluation of the student. Out of the total possible score of 254 points, scores on the mid-term ranged from 140 to 234. Scores on the final had less variance with the range being from 146 to 252. The mean score for the mid-term variable was identified as 192.18. The mean score for the final variable was identified as 216.17. Results from the CPCE indicated scores ranging from 72 to 118, out of a possible 136 points. The mean score for the CPCE was identified as 94.7039.

Table 7: CPCE Frequency Data

Variable	N	Minimum	Maximum	Mean	Std. Dev.
CPCE total score	152	72	118	94.70	11.00
CCS Midterm total	152	130	234	192.18	21.09
CCS Final total	152	146	252	216.17	19.10

Statistical Assumptions

Prior to data analysis, the data was checked to ensure that assumptions were met for statistical analyses. Statistical assumptions are discussed in the following section. Being that the dependent variables and the independent variables were all continuous in nature, continuous assumption was met.

Normality of the Dependent Variable

Each of the three dependent variables (CPCE total score, CCS mid-term total score, and CCS final total score) were checked for normality. Histograms below show that the data did appear normal. Normality would have potentially increased as the sample size increased. It is noteworthy that tests of normality were conducted on the DVs also in order to check this assumption. CPCE Total met the assumptions of normality; however according to the normality tests of Shapiro Wilks, CPCE scores were normally distributed (p =.236). A histogram further supports the normal distribution for the CPCE and CCS mid-term and final scores (Figure 1). A

normality assumption was also violated due to an outlier (Figures 2-4). Normality violations are

common in the human services field due to the individuality of participants.
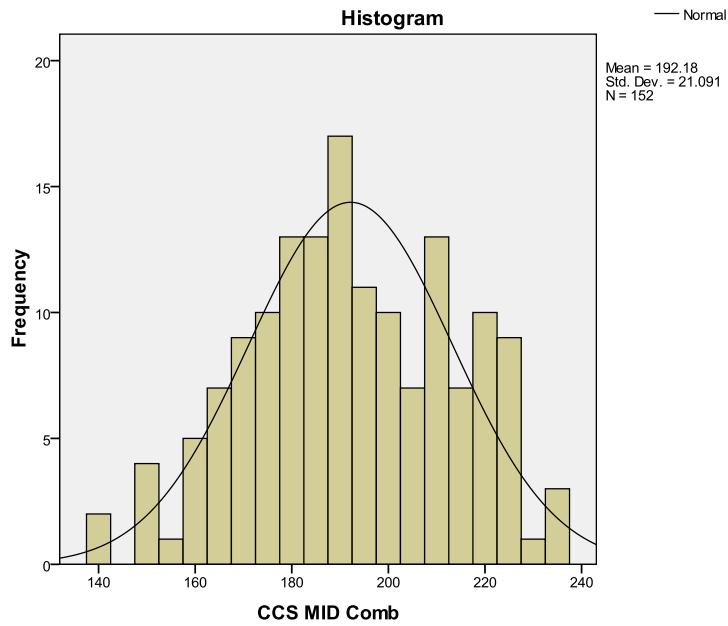
Figure 1: CCS Mid Semester Combined Scores
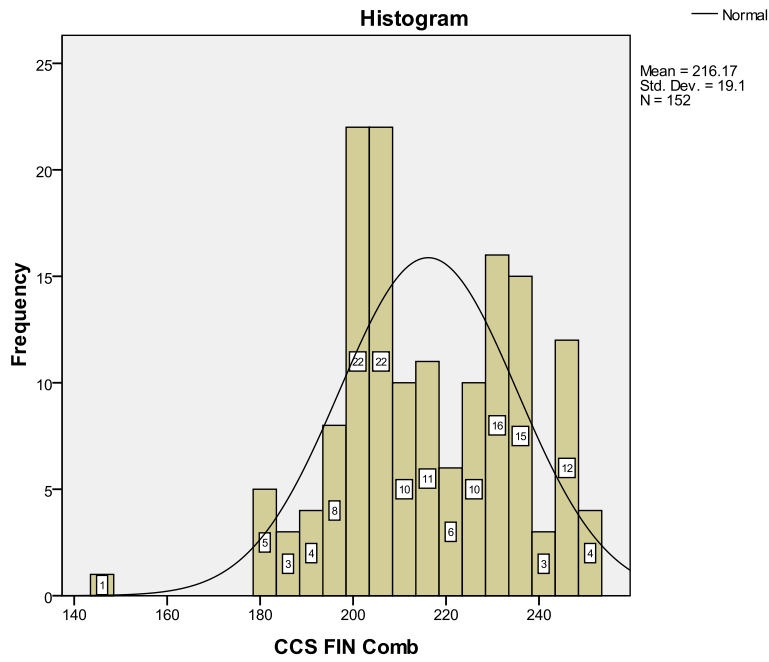
Figure 2: CCS Final Combined Scores
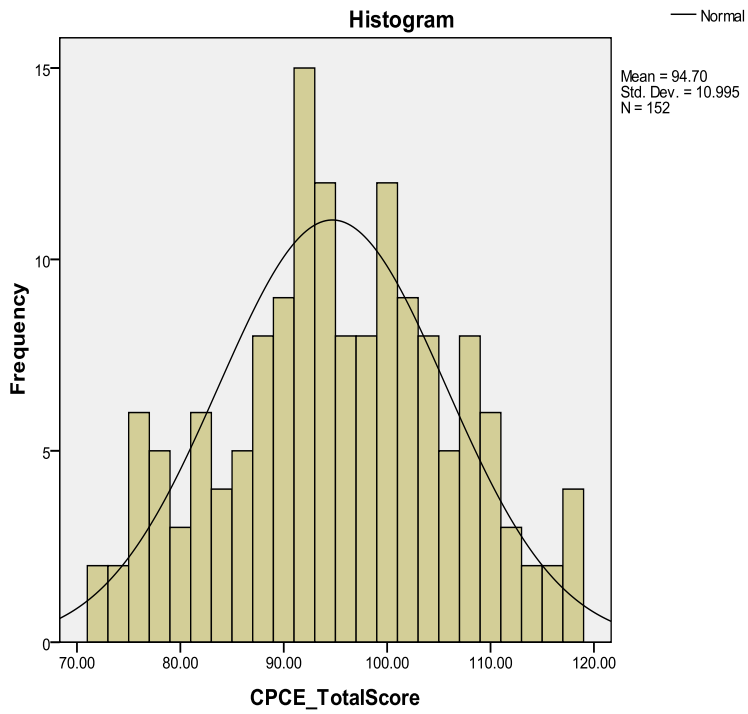
Figure 3: CPCE Scores

88

Linearity Between DV and IV

The assumption of linearity of the DV and IV was not met, as Figure 5 and Figure 6 depicts. However, Tabachnick and Fidell (1996) denote that while moderate cases of violations in linearity and homoscedasticity weaken the analysis it does not invalidate the results. Therefore the researcher elected to continue the study.
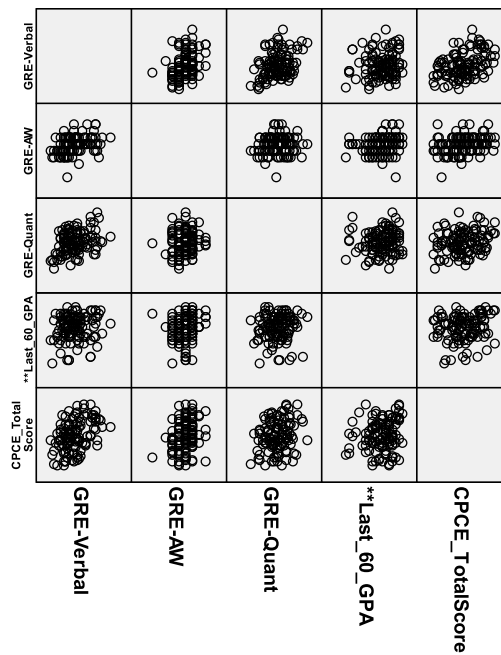
Figure 4: Scatter Plot GRE, GPA, and CPCE
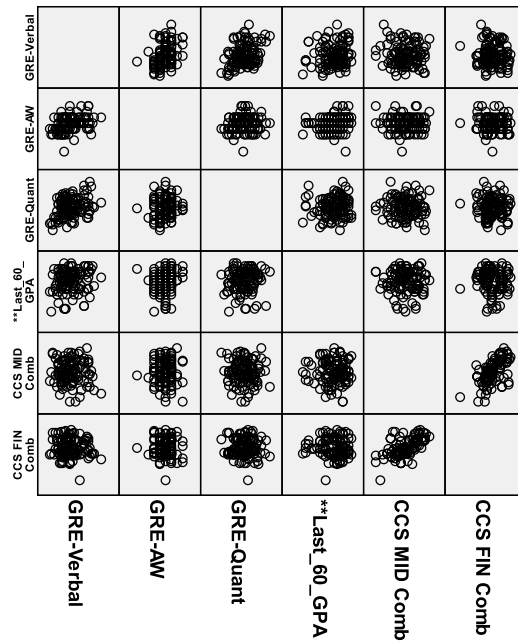
Figure 5: Scatter Plot GRE, GPA, and CCS

Multicollinearity Among IVs

Multicollinearity was verified, using the Coefficients Results from the Multiple Regression analysis. Tolerance levels suggest that multicollinearity was not present GRE verbal scores (.787), GRE quantitative scores (.860), GRE analytic writing scores (.888), and all undergraduate GPA (.986). As a result, the assumption of multicollinearity was met.

Results

The following paragraph reviews the research questions and hypotheses and the linked results from the analysis. The research hypothesis stated the following: Counselor education students scoring at higher levels of graduate aptitude (GRE) and undergraduate achievement

(UGPA) will score at higher levels of counselor knowledge (CPCE) and counseling skills, dispositions, and behaviors (CCS) than students at lower levels of aptitude and achievement. To examine this possibility, three analyses were conducted by the researcher.

Analysis One

IV: UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores

DV: CPCE total score

A multiple linear regression analysis was applied to the outcome variable of CPCE total scores and the predictor variables of UGPA, GRE Quantitative scores, GRE Analytic Writing scores, and GRE Verbal scores. Overall, the linear composite of the predictor variables (UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores) accounted for 26.1% (R^2 = .261) of the variance in CPCE scores, $F(4, 147) = 13.011$, $p < .001$ (See Table 8).

Table 8: CPCE Total Score Model Summary

						Change Statistics			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	f1	f2	Sig. F Change
1	.511[a]	.261	.241	9.57684	.261	13.011	4	147	.000

However, among the four predictor variables, only the GRE verbal score and GRE AW scores had a statistically significant beta coefficient. The beta weights suggested that for every increase in GRE Verbal scores, there was a .384 unit increase observable in the CPCE total scores, t = 4.811, Beta = .384, $p > .001$. The beta weights also suggested that for every increase

91

in GRE AW scores, there was a .148 unit increase observable in the CPCE total scores, t = .963,

Beta = .148, *p* > .051 (See Table 9).

Table 9: CPCE Total Score Coefficient Table

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	49.070	8.372		5.861	.000		
GRE-Verbal	.054	.011	.384	4.811	.000	.787	1.271
GRE-Quant	.010	.008	.092	1.208	.229	.860	1.163
GRE-AW	2.214	1.128	.148	1.963	.051	.888	1.126
UGPA	2.174	2.099	.075	1.036	.302	.946	1.057

The Pearson product moment correlation (two tailed) analyses supported the results of a

statistically significant relationship between CPCE total scores and GRE Verbal scores (r = .474,

p > .001), but also found significance in the three other predictor variables; GRE AW scores (r =

.286, *p* < .001), GRE Quant scores (r = .257, *p* < .01), and UGPA scores (r = .174, *p* < .05). The

effect size was small to moderate with GRE Verbal scores having close to a large effect size

(Cohen, 1988). Results indicated that there was a significant relationship between the model

(using UGPA) and the dependent variable of CPCE total score. Therefore, students scoring at

higher levels on the GRE Verbal were the most significantly predictive of CPCE total scores

(Table 10).

Table 10: CPCE Total Score Pearson Correlation

		CPCE Total Score	GRE-Verbal	GRE-Quant	GRE-AW
Pearson	GRE-Verbal	.474			
	GRE-Quant	.257	.374		
	GRE-AW	.286	.294	.106	
	UGPA	.174	.162	.067	.207
Sig.	GRE-Verbal	.000			
	GRE-Quant	.001	.000		
	GRE-AW	.000	.000	.098	
	UGPA	.016	.023	.207	.005

Analysis One Post-hoc

Due to the significant results found in Analysis one, two post-hoc analyses were incorporated to further examine the variables.

IV: UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores

DV: CPCE subscale scores (8)

The Analysis One post-hoc utilized a canonical correlation analysis (CCA) to examine the entry level variables (GRE Verbal scores, GRE Quantitative scores, GRE Analytic Writing scores, and UGPA) against the dependent variables of the CPCE subscale (8) scores. Canonical correlation was selected so that the researcher could examine the relationship between two groups consisting of multiple independent and dependent variables. Table 36 shows the results

93

of the canonical correlation analysis that was used to examine the variables. Results indicated

that there was an overall significant relationship between the independent predictor variables

(GRE Verbal, Quantitative, and Analytic Writing and UGPA) and the eight variables of the

CPCE.

The results of the canonical correlation analysis using the four admissions variables and

the eight sub scores of the CPCE yielded four roots with squared canonical correlations (R^2_c) of

.29, .12, .05, and .03 for each successive root (Table 11).

Table 11: CPCE Subscale Scores Eigen values and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.41283	64.25757	64.25757	.54055	.29220
2	.14139	22.00731	86.26488	.35196	.12387
3	.05634	8.76967	95.03456	.23095	.05334
4	.03190	4.96544	100.00000	.17583	.03091

Collectively, the full model across the four roots were statistically significant using the

Wilks's λ = .568 criterion, $F(32, 517.89) = p < .001$). Because Wilks's λ represents the variance

unexplained by the model, $1 - \lambda$ yields the full model effect size in an $r2$ metric. Thus, for the set

of four canonical functions, the $r2$ type effect size was .432, which indicates that the full model

explained a substantial portion, about 43%, of the variance shared between the variable sets

(Table 12).

94

Table 12: CPCE Subscale Score Multivariate Test of Significance Full model

Test	Value	Approx. F	Hypot. DF	Error DF	Sig. of F
Pillais	.50032	2.55545	32	572	.000
Hotellings	.64246	2.78063	32	554	.000
Wilks	.56890	2.67468	32	517.89	.000
Roys	.29220				

Further examination using dimension reduction analysis indicated that only the first two roots explain a reasonable amount of variance between the variable sets (Root 1 = 29%, and Root 2 = 12%). The remaining Roots only account for 8% of the variance, combined (Table 13).

Table 13 presents the standardized canonical function coefficients for roots 1 and 2. Looking at the root one coefficients, the relevant criterion variables making contributions to the synthetic criterion variable were primarily GRE Quantitative (.589), UGPA (.542), and GRE Verbal (.283). Root function two coefficients indicated the criterion variables of significance as the GRE Verbal (.787), UGPA (-.544) GRE AW (.392), and GRE Quantitative (-.352).

Table 13: CPCE Subscale Scores Standard Canonical Coefficients

Variable	1	2	3	4
GRE Verbal	.28316	.78665	.05961	.77396
GRE Quant	.58873	-.35202	.68961	-.45047
GRE AW	.09141	.39190	-.41567	-.91611
UGPA	.54196	-.54394	-.61192	.29959

Post-hoc Analysis: Multiple linear-regression

Independent Variables: CPCE scores by section (8) (human growth and development, social and cultural foundations, helping relationships, group work, career and lifestyle development, appraisal, research and program evaluation, and professional orientation and ethics.)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

Following the canonical correlation another post hoc analysis was incorporated to further examine the relationships between the GRE (Verbal, Quantitative, and Analytic Writing) and UGPA variables with each of the subsections of the CPCE. A multiple linear regression was first used with the CPCE (8) subsections being utilized as the predictor variables to separately identify which areas were related to the GRE Verbal subsection.

Overall, the linear composite of the CPCE predictor variables accounted for 23.3% ($R^2 =$ .233) of the variance in GRE Verbal scores, $F(8, 143) = 5.436$, $p < .001$ (See Table 14).

Table 14: GRE-Verbal Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.483[a]	.233	.190	70.706	.233	5.436	8	143	.000

Among the eight predictor variables, only the CPCE subscale score" helping relationships" had a statistically significant beta coefficient. The beta weights suggested that for

96

every increase in CPCE helping relationships subscale scores, there was a .184 unit increase observable in the GRE Verbal scores, t = 2.045, Beta = .184, $p > .05$ (See Table 15).

Table 15: GRE-Verbal Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	171.545	51.659		3.321	.001		
cpce1	.619	2.663	.019	.232	.817	.769	1.300
cpce2	4.941	3.285	.144	1.504	.135	.585	1.710
cpce3	6.895	3.371	.184	2.045	.043	.665	1.504
cpce4	5.006	2.912	.159	1.719	.088	.625	1.599
cpce5	.698	2.835	.020	.246	.806	.800	1.250
cpce6	2.969	2.869	.078	1.035	.302	.938	1.066
cpce7	2.513	2.921	.082	.861	.391	.594	1.683
cpce8	.146	3.067	.004	.048	.962	.692	1.445

DV: GRE Quant

IV: CPCE 8

Next, a multiple linear regression was used with the CPCE (8) subsections being utilized as the predictor variables to separately identify which areas were related to the GRE Quantitative subsection.

Overall, the linear composite of the CPCE predictor variables accounted for 13.9% ($R^2 = .139$) of the variance in GRE Quantitative scores, $F(8, 143) = 2.883$, $p < .005$ (See Table 16).

Table 16: GRE-Quant Model Summary

		R	Adjusted	Std. Error of the	Change Statistics				
Model	R	Square	R Square	Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.373[a]	.139	.091	96.126	.139	2.883	8	143	.005

Among the eight predictor variables, only the CPCE subscale score" professional

orientation and ethics" had a statistically significant beta coefficient. The beta weights suggested

that for every increase in CPCE professional orientation and ethics subscale scores, there was a -

.253 unit decrease observable in the GRE Quantitative scores, $t = -2.715$, Beta = -.253, $p > .05$

(See Table 17).

Table 17: GRE-Quant Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	386.017	70.231		5.496	.000		
cpce1	1.175	3.621	.029	.324	.746	.769	1.300
cpce2	5.028	4.466	.114	1.126	.262	.585	1.710
cpce3	3.293	4.583	.068	.719	.474	.665	1.504
cpce4	5.882	3.959	.146	1.486	.140	.625	1.599
cpce5	.088	3.854	.002	.023	.982	.800	1.250
cpce6	4.882	3.900	.100	1.252	.213	.938	1.066
cpce7	5.411	3.971	137	1.363	.175	.594	1.683
cpce8	11.323	4.10	-.253	-2.715	.007	.692	1.445

DV: GRE AW

IV: CPCE 8

Next, a multiple linear regression was used with the CPCE (8) subsections being utilized as the predictor variables to separately identify which areas were related to the GRE AW subsection.

Overall, the linear composite of the CPCE predictor variables accounted for 11.3% ($R^2 =$ .113) of the variance in GRE AW scores, $F(8, 143) = 2.288$, $p < .005$ (See Table 18).

Table 18: GRE-AW Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
					R Square Change	F Change	df1	df2	Sig. F Change
1	.337[a]	.113	.064	.7098	.113	2.288	8	143	.025

Among the eight predictor variables, only the CPCE subscale score" human growth and development" had a statistically significant beta coefficient. The beta weights suggested that for every increase in CPCE human growth and development subscale scores, there was a .175 unit increase observable in the GRE AW scores, $t = 1.946$, Beta $= .175$, $p > .05$ (See Table 19).

Table 19: GRE-AW Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.175	.519		4.194	.000		
cpce1	.052	.027	.175	1.946	.054	.769	1.300
cpce2	.045	.033	.141	1.371	.173	.585	1.710
cpce3	.011	.034	.031	.322	.748	.665	1.504
cpce4	.020	.029	.068	.685	.494	.625	1.599
cpce5	.008	.028	.023	.265	.791	.800	1.250
cpce6	.036	.029	.101	1.248	.214	.938	1.066
cpce7	-.017	.029	-.060	-.591	.556	.594	1.683
cpce8	.002	.031	.005	.054	.957	.692	1.445

DV: UGPA

IV: CPCE 8

Next, a multiple linear regression was used with the CPCE (8) subsections being utilized as the predictor variables to separately identify which areas were related to the UGPA score.

Overall, the linear composite of the CPCE predictor variables accounted for 15.3% ($R^2 = .153$) of the variance in UGPA scores, $F(8, 143) = 3.227$, $p < .005$ (See Table 20).

Table 20: UGPA Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.391[a]	.153	.106	.36104	.153	3.227	8	143	.002

Among the eight predictor variables, three of the CPCE subscale scores had a statistically significant beta coefficient; social and cultural foundations, career and lifestyle development, and

100

appraisal. The beta weights suggested that for every increase in CPCE the social and cultural

foundations subscale scores, there was a .309 unit increase observable in the UGPA scores, t =

3.068, Beta = .309, *p* > .05. The beta weights also suggested that for every increase in the CPCE

career and lifestyle development subscale scores, there was a -.201 unit decrease observable in

the UGPA scores, t = -2.340, Beta = -.201, *p* > .05. Additionally, the beta weights also

suggested that for every increase in CPCE the appraisal subscale scores, there was a .238 unit

increase observable in the UGPA scores, t = 2.990, Beta = .238, *p* > .05.

Table 21: UGPA Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.892	.264		10.962	.000		
cpce1	.005	.014	.031	.350	.727	.769	1.300
cpce2	.051	.017	.309	3.068	.003	.585	1.710
cpce3	-.006	.017	-.034	-.361	.719	.665	1.504
cpce4	-.005	.015	-.030	-.304	.762	.625	1.599
cpce5	-.034	.014	-.201	-2.340	.021	.800	1.250
cpce6	.044	.015	.238	2.990	.003	.938	1.066
cpce7	-.005	.015	-.032	-.323	.747	.594	1.683
cpce8	-.002	.016	-.014	-.150	.881	.692	1.445

Analysis Two

IV: UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores

DV: CCS mid-term total score

Analysis two was divided into two parts as the researcher felt there was the potential for

more variance in the CCS mid-term scores than the final scores. Analysis two utilized a multiple

linear regression to examine the entry level variables (GRE Verbal, GRE Quantitative, GRE

Analytic Writing, and UGPA) in relation to the dependent variable of the CCS mid-term total score. Table 22 shows the results of the multiple regression analysis that was used to examine the variables. Descriptive statistics for the dependent variables were as follows: CCS mid-term total ($N = 152$, $M = 192.18$, $SD = 21.091$), and CCS final total ($N = 152$, $M = 216.17$, $SD = 19.100$).

A linear multiple regression analysis was first applied to the variable of CCS mid-term total scores and the predictor variables of GRE Verbal, GRE Quantitative, GRE Analytic Writing scores, and UGPA (Table 22). Overall, the linear composite of the predictor variables accounted for .4% ($R^2 = .004$) of the variance in CCS mid-term total scores, $F(4, 147) = .147$, $p < .001$.

Table 22: CCS Mid-Term Total Model Summary

						Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	f1	f2	Sig. F Change
1	.063[a]	.004	-.023	21.33	.004	.147	4	147	.964

Among the four predictor variables, none had a statistically significant beta coefficient.

Table 23: CCS Mid-Term Total Coefficient's

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	201.607	18.650		10.810	.000		
GRE-Verbal	-.013	.025	-.09	-.523	.602	.787	1.271
GRE-Quant	.002	.019	.010	.112	.911	.860	1.163
GRE-AW	-.0852	2.512	-.030	-.339	.735	.888	1.126
UGPA	-.385	4.676	-.007	-.082	.935	.946	1.057

The Pearson product moment correlation (two tailed) analyses also showed that there was not a statistically significant relationship between CCS mid-term total scores and GRE Verbal scores ($r = -.055$, $p > .05$), GRE AW scores ($r = -.044$, $p > .05$), UGPA scores ($r = -.020$, $p > .05$), and GRE Quant scores ($r = -.012$, $p > .05$). Overall, results of the analysis indicated that there was not a significant relationship between the model and the dependent variable of the CCS mid-term total score (Table 24).

Table 24: CCS Mid-Term Total Correlations

		CCS mid-Total Score	GRE-Verbal	GRE-Quant	GRE-AW
Pearson	GRE-Verbal	-.055			
	GRE-Quant	-.012	.106		
	GRE-AW	-.044	.067	.106	
	UGPA	-.020	.162	.067	.207
Sig.	GRE-Verbal	.252			
	GRE-Quant	.442	.000		
	GRE-AW	.294	.000	.098	
	UGPA	.402	.023	.207	.005

IV: UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores

DV: CCS final total score

A linear multiple regression analysis was next applied to the outcome variable of CCS final total scores and the predictor variables of UGPA, GRE Quantitative scores, GRE Analytic Writing scores, and GRE Verbal scores. Overall, the linear composite of the predictor variables accounted for 1.6% (R^2= .016) of the variance in CCS final total scores, $F(4, 167)$ =.612, $p <$ .001.   Overall, the R = .128[a] value, indicates that the independent variables (UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores) are not significantly related to the dependent variable of CCS final evaluation total score (Table 25).

Table 25: CCS Final Total Scores Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
					R Square Change	F Change	f1	f2	Sig. F Change
1	.128[a]	.016	-0.10	19.199	.016	.612	4	167	.654

Additionally, among the four predictor variables, none had a statistically significant beta coefficient.

Table 26: CCS Final Total Score Coefficient's

| Model 1 | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
	B	Std. Error	Beta			Tolerance	VIF
Constant	226.385	16.784		13.488	.000		
GRE-Verbal	-.019	.022	-.080	-.865	.388	.787	1.271
GRE-Quant	-.005	.017	-.024	-.271	.787	.860	1.163
GRE-AW	-1.817	2.260	-.070	-.804	.423	.888	1.126
UGPA	2.412	4.208	.048	.573	.867	.946	1.057

The Pearson product moment correlation analysis also showed that there was not a statistically significant relationship between CCS final total scores and GRE Verbal scores ($r = -.101$, $p > .05$), GRE AW scores ($r = -.086$, $p > .05$), GRE Quant scores ($r = -.058$, $p > .05$), and

105

UGPA scores (r = .019, p >.05). Overall, results of the analysis indicated that there was not a

significant relationship between the model and the dependent variable of the CCS final total

score (Table 27).

Table 27: CCS Final Total Score Correlations

		CCS Final-Total Score	GRE-Verbal	GRE-Quant	GRE-AW
Pearson	GRE-Verbal	-.101			
	GRE-Quant	-.058	.374		
	GRE-AW	-.086	.294	.106	
	UGPA	.019	.162	.067	.207
Sig.	GRE-Verbal	.107			
	GRE-Quant	.239	.000		
	GRE-AW	.147	.000	.098	
	UGPA	.407	.023	.207	.005

Analysis Two Post-hoc

    IV: UGPA, GRE Quantitative scores, GRE Analytic Writing scores, GRE Verbal scores

    DV: CCS midterm and final subscale scores (3)

    Analysis Two also utilized a canonical correlation to further examine the entry level

variables (UGPA, GRE Verbal scores, GRE Quantitative scores, and GRE Analytic Writing

scores) against the dependent variables of the CCS mid-term and final subscale (3) scores.

Canonical correlation was selected so that the researcher could examine multiple independent

and dependent variables. Figure six shows the results of the canonical correlation analysis that was used to examine the variables. Results indicated that there was not a significant relationship between the independent predictor variables (GRE Verbal, Quantitative, and Analytic Writing and UGPA) and the three dependent variables of the CCS.

The results of the canonical correlation analysis using the four admissions variables and the 3 sub scores of the CCS midterm and final yielded four roots with squared canonical correlations (R^2_c) of .10, .04, .02, and .01 for each successive root (Table 28).

Table 28: CCS Midterm and Final Subscales Eigen Values and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.11561	62.95148	62.95148	.32192	.10363
2	.04019	21.88194	84.83342	.19655	.03863
3	.02260	12.30601	97.13943	.14866	.02210
4	.00525	2.86057	100.00000	.07229	.00523

Collectively, the full model across the four roots was not statistically significant using the Wilks's λ = .838 criterion, $F(24, 496.59) = p<.371$) (See Table 29).

Table 29: CCS Midterm and Final Subscales Multivariate tests of Significance

Test	Value	Approx. F	Hypot. DF	Error DF	Sig. of F
Pillais	.16959	1.06998	24	580	.374
Hotellings	.18365	1.07512	24	562	.368
Wilks	.83829	1.07309	24	496.59	.371
Roys	.10363				

Further examination of each individual root was not necessary due to the overall model not being found significant.

Table 30: CCS Midterm and Final Subscales Standardized Canonical Coefficients

Variable	1	2	3	4
GRE Verbal	-.46804	.04906	.66065	-.78270
GRE Quant	-.16720	.58890	.20236	.86438
GRE AW	-.44278	.32716	-.90299	-.08921
UGPA	.80528	.58170	.04562	-.26104

Post-hoc Analysis: Multiple linear-regression

Independent Variables: CCS midterm and final subscale scores (3)

Dependent Variables (separate analysis for each): (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average

Following the canonical correlation another post hoc analysis was incorporated to further examine the relationships between the GRE and UGPA variables with each of the subsections of the CCS. First, a multiple linear regression was used with the mid-term and final CCS (3)

subsections being utilized as the predictor variables to separately identify which areas were related to the GRE Verbal subsection.

Overall, the linear composite of the CCS predictor variables accounted for 4.4% ($R^2 =$ .044) of the variance in GRE Verbal scores, $F(6, 145) = 1.107$, $p > .05$ (See Table 31).

Table 31: GRE Verbal Model Summary

| | | | | Std. Error | Change Statistics | | | | |
| | | R | Adjusted | of the | R Square | F | | | Sig. F |
Model	R	Square	R Square	Estimate	Change	Change	df1	df2	Change
1	.209[a]	.044	.004	78.409	.044	1.107	6	145	.361

Although the overall model was not significant, among the predictor variables, the CCS final evaluation on the counseling skills subscale score had a statistically significant beta coefficient. The beta weights suggested that for every increase in the CCS counseling skills subscale scores, there was a -.241 unit decrease observable in the GRE Verbal scores, $t = -1.965$, Beta = -.241, $p > .05$ (See Table 32).

Table 32: GRE Verbal Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	541.019	81.825		6.612	.000		
CCS1TotalPracMid	.361	.918	.045	.393	.695	.509	.964
CCS2TotalPracMid	1.338	1.413	.136	.947	.345	.320	.124
CCS3TotalPracMid	-2.149	1.516	-.206	-1.417	.159	.313	.196
CCS1TotalPracFin	-2.150	1.094	-.241	-1.965	.051	.439	.276
CCS2TotalPracFin	-.709	1.827	-.065	-.388	.698	.232	.307
CCS3TotalPracFin	2.195	1.976	.171	1.111	.268	.280	.578

DV: GRE Quant

IV: CCS midterm and final

Next, a multiple linear regression was used with the mid-term and final CCS (3) subsections being utilized as the predictor variables to separately identify which areas were related to the GRE Quantitative subsection.

Overall, the linear composite of the CCS predictor variables accounted for 3.4% ($R^2 = .034$) of the variance in GRE Quantitative scores, $F(6, 145) = .849$, $p > .05$ (See Table 33).

Table 33: GRE Quant Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.184[a]	.034	.006	101.110	.034	.849	6	145	.535

Additionally, none of the predictor variables had a significant beta coefficient.

Table 34: GRE Quant Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	579.983	105.515		5.497	.000		
CCS1TotalPracMid	-.034	1.184	-.003	-.029	.977	.509	.964
CCS2TotalPracMid	3.202	1.822	.254	1.757	.081	.320	.124
CCS3TotalPracMid	-3.134	1.955	-.234	-1.603	.111	.313	.196
CCS1TotalPracFin	-1.381	1.411	-.121	-.979	.329	.439	.276
CCS2TotalPracFin	-1.938	2.356	-.139	-.822	.412	.232	.307
CCS3TotalPracFin	2.692	2.548	.163	1.056	.293	.280	.578

DV: GRE AW

IV: CCS midterm and final

Next, a multiple linear regression was used with the mid-term and final CCS (3) subsections being utilized as the predictor variables to separately identify which areas were related to the GRE AW subsection.

Overall, the linear composite of the CCS predictor variables accounted for 4% ($R^2 = .040$) of the variance in GRE AW scores, $F(6, 145) = 1.019$, $p > .05$ (See Table 35).

Table 35: GRE AW Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.201[a]	.040	.001	.7333	.040	1.019	6	145	.415

Additionally, none of the predictor variables had a significant beta coefficient.

Table 36: GRE AW Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	4.778	.765		6.244	.000		
CCS1TotalPracMid	-.009	.009	-.118	-1.032	.304	.509	.964
CCS2TotalPracMid	.016	.013	.174	1.210	.228	.320	.124
CCS3TotalPracMid	-.009	.014	-.097	-.669	.504	.313	.196
CCS1TotalPracFin	-.013	.010	-.150	-1.225	.223	.439	.276
CCS2TotalPracFin	.014	.017	.139	.822	.412	.232	.307
CCS3TotalPracFin	-.010	.018	-.081	-.529	.597	.280	.578

DV: UGPA

IV: CCS midterm and final

Next, a multiple linear regression was used with the mid-term and final CCS (3) subsections being utilized as the predictor variables to separately identify which areas were related to the UGPA score.

Overall, the linear composite of the CCS predictor variables accounted for 6% ($R^2 = .060$) of the variance in UGPA scores, $F(6, 145) = 1.545$, $p > .05$ (See Table 37).

Table 37: All UGPA Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.245[a]	.060	.021	.37767	.060	1.545	6	145	.167

Among the predictor variables, three of the CCS subscale scores had a statistically significant beta coefficient; Counseling skills (mid-term and final) scores, and the professional

dispositions subscale score on the final. The beta weights suggested that for every increase in the counseling skills mid-term score, there was a -.216 unit decrease observable in the UGPA scores, t = -1.915, Beta = -.216, $p > .05$. The beta weights also suggested that for every increase in the counseling skills final score, there was a -.325 unit decrease observable in the UGPA scores, t = -2.678, Beta = -.325, $p > .05$. Additionally, the beta weights also suggested that for every increase in CCS professional dispositions final scores, there was a -.319 unit decrease observable in the UGPA scores, t = -1.906, Beta = -.319, $p > .05$ (Table 38).

Table 38: All UGPA Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.951	.394		7.488	.000		
CCS1TotalPracMid	-.008	.004	-.216	-1.915	.057	.509	.964
CCS2TotalPracMid	.002	.007	.039	.271	.787	.320	.124
CCS3TotalPracMid	.006	.007	.124	.864	.389	.313	.196
CCS1TotalPracFin	.014	.005	.325	2.678	.008	.439	.276
CCS2TotalPracFin	-.017	.009	-.319	-1.906	.059	.232	.307
CCS3TotalPracFin	.008	.010	.125	.819	.414	.280	.578

Analysis Three

  IV: CCS midterm total scores, CCS final total scores

  DV: CPCE total scores

  As discussed in chapter three, in addition to the hypothesis, one research question was used to further examine the outcome variables. The question was aimed at determining if there was a relationship between the CCS and CPCE instruments.

113

First a Pearson Correlation analysis, using the CPCE total and CCS total scores was conducted. To further examine the question, the subscales of each of the CPCE (8) and CCS (midterm and final) (3) were examined through a post-hoc analysis which incorporated an additional canonical correlation.

The results of the Pearson analysis on the independent variables of the CCS midterm and final scores and the dependent variable of the CPCE are shown in Table 39. The Pearson product moment correlation (two tailed) analyses showed that there was not a statistically significant relationship between CCS mid-term total scores and CPCE total scores ($r = .088$, $p > .05$). The Pearson product moment correlation (two tailed) analyses also showed that there was not a statistically significant relationship between CCS final total scores and CPCE total scores ($r = .082$, $p > .05$).

Table 39: CPCE Total Scores Correlations

Variable	CCS mid-term total	CCS Final total
CPCE total	.088	.082
Note. P<.001		

Analysis Three Post-hoc

IV: CCS midterm subscale scores (3), CCS final subscale scores (3)

DV: CPCE subscale scores (8)

Table 40 shows the results of the canonical correlation analysis that was used to examine the variables (CPCE subscale scores (8) and CCS subscale scores (3). Two separate analyses were conducted to examine both the CCS mid-term and CCS final evaluation for the possible relationship to the CPCE. The first analysis used the mid-term scores with the CPCE. The below section is based on this analysis. Results indicated that there was not a significant relationship between the two sets of dependent variables (CPCE total and CCS total scores).

The results of the canonical correlation analysis using the four admissions variables and the 3 sub scores of the CCS midterm yielded three roots with squared canonical correlations (R^2_c) of .13, .07, and .02 for each successive root.

Table 40: CPCE Subscale Scores Eigen Values and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Sq. Cor.
1	.14324	59.88872	59.88872	.12530
2	.07036	29.41530	89.30402	.06573
3	.02558	10.69598	100.00000	.02494

Collectively, the full model across the four roots was not statistically significant using the Wilks's λ = .797 criterion, F (24, 409.54 = p>.106) (See Table 41).

115

Table 41: CPCE Subscale Scores Multivariate tests of Significance

Test	Value	Approx. F	Hypot. DF	Error DF	Sig. of F
Pillais	.21597	1.38665	24	429	.107
Hotellings	.233918	1.39190	24	419	.105
Wilks	.79682	1.39001	24	409.54	.106
Roys	.12530				

Further examination of each individual root was not necessary due to the overall model not being significant.

Table 42: CCS Total Standard Canonical Coefficients

Variable	1	2	3
CCS1total (mid-term)	-.30355	1.07495	-.27623
CCS2total (mid-term)	1.68815	-.13064	-.13225
CCS2total (mid-term)	-1.10588	-.05612	1.17181

Another analysis used the CCS final subscale (3) scores with the CPCE subscale (8). The below section is based on this analysis. Results indicated that there was not a significant relationship between the two sets of dependent variables (CCS final subscale scores and CPCE total).

The results of the canonical correlation analysis using the four admissions variables and the 3 sub scores of the CCS final yielded three roots with squared canonical correlations (R^2_c) of .05, .02, and .01 for each successive root (Table 43).

Table 43: CCS Total Eigen Values and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.05482	58.38651	58.38651	.22796	.05197
2	.02389	25.44968	83.83619	.15276	.02334
3	.01518	16.16381	100.00000	.12226	.01495

Collectively, the full model across the four roots was not statistically significant using the

Wilks's λ = .912 criterion, F (24, 409.54 = p<.960) (See Table 44).

Table 44: CCS Total Multivariate test of Significance

Test	Value	Approx. F	Hypot. DF	Error DF	Sig. of F
Pillais	.09025	.55442	24	429	.958
Hotellings	.09388	.54635	24	419	.962
Wilks	.91207	.55021	24	409.54	.960
Roys	.05197				

Further examination of each individual root was not necessary due to the overall model

not being significant.

Table 45: CCS Total Standardized Canonical Coefficients

Variable	1	2	3
CCS1total (final)	1.07664	.36845	.55033
CCS2total (final)	-1.70981	.24313	1.01586
CCS3total (final)	.82571	.54699	-1.48039

Chapter Summary

Chapter 4 presented the results of the data analysis procedures calculated in order to examine the investigators research question and hypothesis, which examined if counselor education students scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) would score at higher levels of counselor knowledge (as measured by the CPCE) and counseling competencies (as measured by CCS) than students who scored at lower levels of aptitude and achievement. The data analyses utilized within the study included (a) Multiple-linear regression analysis, (b) Canonical correlation analysis and (c) Pearson product-moment correlation (two-tailed). Chapter 5 discusses the findings of the analyses including implications and limitations of the study.

CHAPTER FIVE
DISCUSSION

The following chapter provides the conclusions drawn from this study. The chapter is

divided into the following six sections: (a) Overview of the Study, (b) Review of the Results, (c)

(c) Limitations, (d) Implications for Counselor Education, (e) Implications based on Analysis

Results, (f) Future Research, and (g) Summary and Conclusion.

Study Overview

For decades, counselor educators have relied on the GRE and UGPA criteria in the

screening and selection of applicants during the admissions process. Past research indicated that

counselor education programs in particular use the two criteria regularly, with programs

reporting the UGPA being used in two-thirds of admissions processes and GRE being used at a

third of the programs (Hollis & Dodson, 2000). The use of the two criteria continues in the

present day despite research which has demonstrated that the two admissions criteria do not hold

great value in predicting the future competencies in the majority of counseling related skill areas.

The purpose of this study was to examine the use of the aptitude (GRE) and achievement

(UGPA) variables used in admissions processes and determine the criterions predictive value for

future competence in the areas of knowledge, skills, behaviors and dispositions. These four

areas of counselor competence were examined through the use of two counselor evaluation

instruments; the Counselor Preparatory Comprehensive Examination (CPCE) and the Counselor

119

Competencies Scale (CCS). The study was necessary due to a continued reliance and common use of the GRE and UGPA admissions criteria in the field of counselor education. It was the researcher's belief that future studies should examine the use of alternative admissions criteria and the development of valid tools to assist in the assessment of applicants on characteristics important to the counseling profession. The research was intended to contribute to the ongoing effort in counselor education to increase the likelihood of admitting applicants with the greatest potential for being successful. In order to carry out the research, the author used the following research question and hypothesis to examine the relationship between the four variables; GRE, UGPA, CPCE, and CCS.

Research Hypothesis

Counselor education students scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) will score at higher levels of counselor knowledge (as measured by the CPCE) and counseling competencies (as measured by the CCS) than students at lower levels of aptitude and achievement.

Research Question

Is there a relationship between competence (as measured by the CCS total score) and knowledge (as measured by the CPCE total scores) and is there a relationship between competence (as measured by the CCS subscale scores) and knowledge (as measured by the CPCE subscale scores)?

In total, almost 20 analyses were initially conducted to examine the research question and hypothesis. The high number of analyses was necessary for the researcher to obtain a variety of in-depth information on the relationships between variables. Due to the researcher's decision to only include the data from the combined UGPA group, the final reporting of data was based on a smaller number of analyses.

The population consisted of a group of ($N = 152$) students from a diverse CACREP accredited program at a large urban university located in the southeast. Included in the study was data from three tracks; mental health counseling, school counseling, and marriage and family therapy.

Review of the Results

The following section contains a discussion regarding the results of the study. The researcher's hypothesis stated that counselor education students scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) would score at higher levels of counselor knowledge (as measured by the CPCE) and counseling competencies (as measured by CCS) than students at lower levels of aptitude and achievement. Overall, results indicated that neither of the admissions criteria (GRE and UGPA) were good predictors of future counseling competence as measured by the CCS mid-term and final evaluation scores. However, consistent with past research, the criteria hold predictive value in the domain of knowledge, as measured by the CPCE.

Analysis one first used a multiple-linear regression analysis dedicated to determining the relationship between the predictor variables and the domain of knowledge, as measured by the

Counselor Preparation Comprehensive Examination (CPCE). The predictor variables consisted of; (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA). Overall, the results, with ensuing limitations, displayed significant correlations between the independent admissions criteria variables and the CPCE. The overall model showed that a significant amount of variance (26.1%) in CPCE total scores could be account for by the four predictor variables. Further analysis using a Pearson correlation also showed that each of the predictor variables were related to the CPCE total score. Specifically, the beta scores indicated that the GRE Verbal subtest was the best predictor of CPCE scores, with the GRE AW subscale score being the second strongest predictor variable.

The Analysis One post-hoc first used a canonical correlation, as it was the researcher's goal to analyze the relationship between two the sets of variables (Tabachnick & Fidell, 2007). Results of the CCA indicated that the four admissions variables accounted for a significant amount of variance (43%) in the CPCE scores. Based on the significant results, an additional post-hoc analysis was incorporated to further examine the admissions variables relationship to the eight subject areas of the CPCE. Overall results from the additional multiple-regression analyses indicated that the CPCE accounted for the most variance in GRE Verbal (23.3%) scores, followed by the UGPA scores (15.3%). Specifically, the beta coefficients indicated that the CPCE "helping relationships" subscale score was positively related to the GRE Verbal score. The UGPA variable indicated three significant beta scores in the CPCE subject areas of social and cultural foundations, career and lifestyle development, and appraisal. The beta scores from the UGPA, however, indicated an inverse relationship in the career and lifestyle development subscale.

These results indicate that aptitude and achievement variables (as measured by the GRE and UGPA criterion) can be used to predict future competence in the domain of knowledge (as measured by the CPCE scores). These results are consistent with a meta-analysis (Kuncel et al., 2001) where GRE scores showed a moderate correlation to student success on the CPCE. A student's success on the CPCE is understandable because it is knowledge based, and requires the same skills necessary to perform well on the GRE and obtain a high GPA (Smaby et al., 2004).

Analysis two tested the hypothesis that counselor education student's scoring at higher levels of graduate aptitude (as measured by the GRE scores) and undergraduate achievement (UGPA) would score at higher levels of counseling competencies (as measured by the CCS) than students at lower levels of aptitude and achievement. There were two parts to this analysis to account for the CCS mid-term and CCS final total scores. Each of the analyses were dedicated to determining the relationship between the independent variables (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, (d) Undergraduate Grade Point Average (UGPA), and the dependent variable of the Counseling Competencies Scale (CCS) (either mid-term score or final score). The results of both the multiple-linear regression and the Pearson correlation, with ensuing limitations, did not produce a statistically significant relationship between the independent predictor variables and either the CCS mid-term total scores or the CCS final total scores. Additionally, the Analysis Two post-hoc also used a canonical correlation to further examine the relationships between the independent predictor variables; (a) Verbal GRE scores (c) Quantitative GRE scores (c) Analytic Writing GRE scores, and (d) Undergraduate Grade Point Average (UGPA) and the CCS subscale (midterm and final)

123

scores: counseling skills, professional dispositions, and professional behaviors. The results from the post-hoc analysis also produced no significant findings.

One final post hoc analysis was conducted for Analysis Two using an MLR to further examine the admissions variables relationship to the three subject areas of the CCS. Overall, results from the multiple-regression analysis indicated that the CCS accounted for only a small amount of variance (less than 6%) in each of the GRE (Verbal, Quantitative, and Analytic Writing) and UGPA scores. Although the overall model for each of the admissions variables was not found to be significant, several of the beta coefficients were found to be significant. Specifically, the beta coefficients indicated that the CCS "counseling skills" subscale score had negative relationships to both GRE Verbal and UGPA scores. The counseling skills sub factor on both the mid-term and final CCS resulted in a negative beta coefficient, indicating that the sub factor was negatively influenced by unit increases in UGPA. Furthermore, the counseling skills sub factor on the final CCS also showed a negative beta coefficient with GRE Verbal scores. The professional dispositions sub factor (on the final CCS) also produced a significant beta score, indicating that the sub factor was negatively influenced by unit increases in UGPA. The findings indicated that none of the admissions criteria could be used to predict scores on the CCS instrument. The results from analysis two (CCS midterm and CCS final total scores) are consistent with previous findings where a lack of a relationship between the two admissions criteria and a counselor's development of clinical skills was consistently found (Smaby et al., 2005; Ray, 2004). These results indicate that aptitude and achievement variables (as measured by the GRE and UGPA criterion) are not significant predictors of future competence in the domain areas of clinical skills, professional dispositions, or professional behaviors (as measured

by the CCS scores). Overall, results showed that a very small amount of variance can be accounted for by the admissions variables in relation to the CCS. The beta scores also suggest that the admissions criteria negatively influence scores in the counseling skills and professional dispositions sub factors.

In order to further examine the relationships between the variables, the researcher sought to determine if there was a relationship between CCS total score and CPCE total scores and between CCS subscale scores and CPCE subscale scores.   In order to examine the question, Analysis Three utilized a Pearson correlation and a post-hoc Canonical correlation. First, a Pearson correlation was used to examine the relationship between the CCS and CPCE total scores. Results produced no significant findings, suggesting that there was not a relationship found between either CCS mid-term or final total scores or the outcome variable of the CPCE total score. These findings indicate that the domain of knowledge is significantly different to the counseling skills, professional dispositions, and professional behaviors that are necessary in counselor development.   The results of the post-hoc analysis using canonical correlation also produced no significant findings, suggesting that there was not a relationship found between either CCS mid-term or final subscale scores and the outcome variable of the CPCE subscale scores.

Overall, results from this study support the value of the GRE and UGPA in predicting an applicant's success on knowledge based measures, such as the CPCE. However, in counselor education, the value of these instruments is questionable beyond that point. Neither the GRE nor UGPA produced significant results, indicating that they were not of any consistent value in the prediction of counseling skills, professional behaviors, or professional dispositions. The

indication of a possible relationship found between the knowledge-based assessment of the CPCE and the midterm skills assessment of the CCS warrants further consideration. Because the canonical correlation analysis examined the subject areas of the CCS and CPCE instruments, there is the potential that the 3 domains of the CCS have value in certain subject areas of the CPCE. These specific areas of value may show that the counseling skills, professional dispositions, and professional behaviors are linked to certain areas of knowledge.

Limitations

As with any research, various limitations exist. The limitations are believed to be confined to the areas of sampling, instrumentation, and data analysis procedures. In the following section each limitation is noted, followed by the researcher's attempts to address each limitation, and finally, how the limitation may have impacted the results. The identification of these limitations is intended to assist future research on the topic in question.

Sampling

Several limitations can be attributed to the sampling methods. First, the study was conducted at only one university and, therefore, had low external validity as one cannot generalize the findings to other universities with any degree of confidence. Similarly, the lack of diversity in the field of counselor education was reflected in the sample by a lack of diversity (e.g., a disproportionate amount of women to men). Finally, the small sample size presented an additional limitation, threatening the generalizability of the study.

To improve the external validity of the sample to other counselor education programs, the researcher selected a CACREP accredited university. The standards of CACREP are aimed at ensuring a high level of consistency in course structure among programs. Not only is the course structures similar across programs, but the evaluation of students is also similar as CACREP specifically outlines the evaluation of students to ensure that all areas of academic, professional, and personal development are accounted for(CACREP, 2009, Section I. P.).

A larger sample would also have been beneficial, as would inclusion of participants from a variety of counseling programs throughout the United States. Using the resources available through the programmatic database and the Office of Institutional Research, the researcher took several steps in an attempt to obtain the largest sample size possible (as described in Chapter Three). However, the CCS data only began to be collected formally in 2009, so the sample was limited to those individuals whose academic record held all of the variables in examination. Additionally, some of the potential participants were missing variables in the data set. In these instances, items from the student record were considered incomplete and the researcher had to confirm the information (when possible) and enter it into the programmatic database prior to analysis. The researcher was also able to increase the sample by utilizing data from the university's Institutional Research Office to obtain the entry level scores necessary to complete each participant's data set. Due to the study examining entry level scores (UGPA and GRE) in relation to outcome measures (CCS and CPCE), only those participants with complete data sets, (including demographic information, entry level scores, and outcome scores) could be used in the sample.

An additional limitation occurred due to the researcher combining the UGPA groups. The UGPA group did not differentiate between the UGPA scores that were from the entire student record and those scores that were only based on the last 60 hours of the student's undergraduate record. Descriptive statistics were run separately for each UGPA group and the results showed that differences between the two groups were not significant. Based on the descriptive information the researcher opted to use the combined group which resulted in a larger sample.

Instrumentation

A second limitation pertains to the outcome measurement used. The CCS instrument is in its infancy, and the administration of the assessment will require standardization. Additionally, internal validity may be decreased due to identified issues with the instruments' inter-rater reliability (Ascher, 2011). Although the CCS still requires additional validation, the researcher's inclusion of the other instruments reflects common practices within the field of counselor education. Many programs use the CPCE as an exit examination, and the exam is commonly paired with multiple other student evaluations, like the CCS, which take into account areas of personal and professional development, outside of the knowledge domain. In addition to the use of the CPCE, the use of the GRE and UGPA predictor scores were significant as a majority of counselor education programs use these criteria in the admissions process (Leverett-Main, 2004). The researcher also attempted to account for the limitations of the CCS instrument by including both mid-term and final evaluation scores. The researcher decided to do this because of the possibility of there being more variance in the mid-term scores over the final evaluation scores.

Although these limitations warrant consideration when evaluating results, one benefit is that they identify key areas for future research. These limitations could be addressed through the future development of the CCS manual, in addition to further standardization of the administration and scoring procedures. Supervisors and students will benefit from the future development of a CCS manual with clear administration instructions, definitions, and a guide to the interpretation of results.

Data Analysis Procedures

This study employed three different data analysis procedures: Multiple-linear regression, Pearson Product Moment Correlation, and Canonical correlation. Although Multiple-linear regression and Pearson Product Moment Correlation analyses are common methods in correlational-research studies, Canonical correlation is a less well-known analysis and is less frequently used, possibly due to the complexity of the interpretation (Thompson, 1991). The researcher included the rationale behind selecting this particular procedure and explained how the results could be interpreted. However, despite these attempts, the results produced from the canonical correlation analysis may be questioned due to the unfamiliarity of the procedure and the complex nature of interpreting the results. In order to address this limitation the researcher included the rational for selecting CCA over the more well-known structural equation modeling, and provided information on how the results should be interpreted.

Implications for Counselor Education

The findings of this study would be useful to admissions committees throughout the field of Counselor Education. These results should cause programs to rethink their admissions strategies and potentially move away from the GRE and UGPA as the main components of the screening and selection process. Whereas the results provide support for the use of the GRE and UGPA as predictive instruments for the student's future knowledge (as measured by the CPCE), these academic tests and grades are not valid predictors of other area of competency, important to counseling (Smaby et al., 2005). Additional implications, based on the results of this study, would lead counselor educators to reconsider the weights assigned to each of the GRE and UGPA criteria. Admissions committees could benefit from developing a rubric to use during the review of applications. Specific weights for each of the criteria could assist admissions committees by increasing the structure of the review process and quantifying the scores so that decisions can be made on the criteria that are of the most value in the specific areas of counselor development.

The research conducted had a simple intention; to examine the overarching goal of admitting students with the greatest potential to serve in the complex role of a counselor. The potential flaw at the admissions point may initiate a series of negative consequences, affecting all aspects of the system, including; the counselor trainee, the counseling professional, the counselor education program, the client, and the overall field. On the other side of the coin, the correction of this potential flaw could have benefits in each of these areas. By changing admissions criteria, counselor educators can have the ability to incorporate empirically sound (or "tested") methods in the screening and selection of applicants.

While the GRE and UGPA do consistently show value in the area of knowledge prediction, the two instruments miss the majority of the other areas that were evaluated in this study. Further research is needed to support the development and use of alternative assessment instruments in the admissions' process. Using tools that have the ability to predict an applicant's potential in the areas of skills, behaviors, and dispositions would provide admissions committees with much more useful information. The selection of students based on measurements other than the GRE and UGPA would increase the likelihood that they would possess more of the characteristics that are needed for their own success as a counselor. Screening for these characteristics would also be an increased gatekeeping measure, which could prevent later issues.

Counselor education programs would also benefit from working with students that are better suited for the profession, as the program will be able to utilize the resources of the faculty and the curriculum to a greater degree. Additionally, counselor education programs will benefit from producing better graduates to enter the field and uphold the standards of the profession, giving counselor education programs and the field of counseling more credibility. Clients will obviously benefit from the selection of better counselors as the services they receive will be supplied by a counselor who was selected because of their aptitude for the profession. Being able to better serve the needs of clients will also promote the counseling field and give increased credibility to the profession.

Descriptive Statistics

The results of the descriptive statistical analysis for this research study have several implications for counselor educators. Although Verbal scores were consistently indicated as being more predictive of CPCE scores, out of the 800 possible points, students, by average scored higher on the Quantitative section ($N = 152$, $M = 530.72$, $SD = 100.81$) of the GRE than on the verbal subsection ($N = 152$, $M = 450.07$, $SD = 78.58$). Because these scores are often used as a combined score, it may be important that admissions committees move towards looking at the scores separately, and consider those applicant's whose Verbal scores are at a higher level, rather than looking at the total score (Verbal and Quantitative). Additionally, the GRE Analytic Writing Score descriptive statistics indicate that the sample selected showed relatively strong scores ($N = 152$, $M = 3.96$, $SD = .73$) of a possible 6 points. This may build support for the inclusion of the AW in the overall evaluation of the GRE admissions criteria when screening applicants.

The descriptive statistics produced from the CPCE analysis also showed results which may have implications for counselor education programs. The results showed that the sample had very similar mean scores ($N = 152$, $M = 94.70$, $SD = 0.99$) to the 2012 national statistics ($N = 1224$, $M = 94.14$, $SD = 13.43$), as reported by the CCE. Program evaluation measures should focus on these measures as a way to ensure that the curriculum continues to support students' attainment of scores consistent with other programs. These mean scores can also be used to measure program development and track progress by monitoring that the scores stay consistent

with the national mean or increase as a result of efforts made to better prepare students for graduation.

In regards to the CCS instrument, although there are not external statistics to compare scores to, the inclusion of both the midterm and final scores, indicates some differences for consideration. The descriptive statistics for the CCS mid-term and final total scores out of a possible 256 points were ($N = 152$, $M = 192.18$, $SD = 1.71$) and ($N = 152$, $M = 216.17$, $SD = 1.55$), respectively. This implies a significant increase in evaluation scores between the midterm and final scoring period. These results may simply imply that student's skills, dispositions, and behaviors improve over the course of the semester as a result of the student's development. However, a point of consideration, and the rational for including both scores, is that the variance between the midterm and final evaluation scores may be better explained by differences in the approach to rating on each of the instruments. At the university being researched, it is a policy that student's must score a minimum of a 6 in each area of assessment (3 categories; 32 items) to pass the practicum course. As such, the case may be made that some students may not earn a 6 but that instructors make a judgment call and rate the student at a 6 because they do not feel that the student is deficient enough in their development to warrant failing the class. The possibility of this occurring may also be explained by the results of Ascher (2011), where the inter-rater reliability of the CCS assessment was indicated as an area requiring improvement.

Analysis One

The following sections will discuss the implication from each analysis and post-hoc. Overall, the results of Analysis One displayed significant correlations between the four

admissions criteria and the CPCE total score. Implications from the overall results support the use of the four criteria, used in combination, for predicting the likelihood that students will be successful in demonstrating counseling knowledge in the areas accessed by the CPCE instrument.

Specifically, beta scores displayed the GRE Verbal score and AW score as having a significant influence in relation to CPCE scores. Beta scores are an indicator of how strongly predictor variables influence outcome variables so the GRE Verbal and AW components are recognized as the admissions criteria which hold the greatest predictive value when speculating about a student's future knowledge attainment. The research findings also suggest that Verbal scores hold the greatest value, as the beta scores indicated that they accounted for more than double the influence of the AW scores. Implications for the use of the GRE Verbal score should be considered, as weighting the Verbal component over the Quantitative component may be more useful than using the combined (Verbal and Quantitative) total score (Schmidt et al., 2009).

The results of the post-hoc analyses also have implications in for counselor educators. The implications from these results are similar to Analysis 1 due to the use of the same variables. One difference was found, however. Unlike Analysis 1, the GRE Quantitative sub-test and the UGPA scores were shown to contribute more to the overall model than the GRE Verbal in the majority of root analyses. The inconsistencies in the results regarding the values of the Quantitative and UGPA criteria require further attention. Because the canonical correlation analysis examined the subject areas of the CPCE, in relation to the admissions criteria, there is the potential that the Quantitative and UGPA criteria have value in certain subject areas of the

134

CPCE. Additionally, because CCA was utilized in combination with a multiple linear regression (MLR) in the post-hoc analysis, several interesting relationships between the individual admissions criteria and the eight individual sub sections of the CPCE were uncovered.

The results of the second post-hoc (MLR) showed that once again, GRE verbal scores accounted for the most variance in the CPCE subscale scores (23.3%). However, this analysis showed that the second greatest contributor was UGPA (15.3%), followed by Quantitative (13.9%), and finally Analytic Writing (11.3%). Additionally, significant beta scores were found for the two greatest contributors, indicating that the Verbal score and UGPA were related to subsections on the CPCE. While the results show that the Verbal score significantly contributes to both the CPCE total score and the helping relationships subsection, the UGPA indicated that the measure may be better used to predict students' scores on specific sub scores (social and cultural foundations, career and lifestyle development, and appraisal) of the CPCE, rather than the CPCE total score. Additionally, the identified relationship between the Verbal score and the UGPA and the subscales has implications in counselor education as outcome measures from the CPCE are used for both student evaluations, in addition to program evaluation. When students are selected based on admissions criteria that predict future success in certain areas of the CPCE and then those students fail to meet the expectation; faculty may use this information to evaluate whether course content is adequately preparing students for the various subsections of the CPCE (Schmidt et al., 2009).

The results from this study conclusively indicate that the GRE Verbal subsection is the best criterion to use in the prediction of future counseling knowledge (as measured by the CPCE). The implications of these results should lead counselor educators to further examine the

GRE and UGPA admissions criteria and conclusively determine the value of the criterion in predicting future knowledge in each of the eight sub sections.   Universities are encouraged to evaluate their existing admissions policies and ensure the weights assigned to the criterion are aimed at selecting the best students for the program of study.

Analysis Two

The second group of analyses examined the same predictor variables (GRE Verbal, Quantitative, Analytic Writing, and UGPA), for a relationship to the CCS midterm and final scores. No significant findings were produced from either analysis on the CCS scores (mid-term or final), indicating that none of the predictor variables could be used to accurately predict scores on the CCS instrument.

Researchers have consistently found that the GRE Verbal and Quantitative scores are not highly predictive of overall success in counseling master's programs (Markert & Monke, 1990). Results from this study support these findings showing a lack of a relationship between the GRE Verbal and Quantitative sections in relation to the students' future demonstration of counseling skills, professional dispositions, or professional behaviors. Implications from the results of Analysis Two should lead counselor educators to understand the limitations of the Verbal and Quantitative sub sections, as they are supported as valuable in the prediction of counseling knowledge, but not in the prediction of skills.

The GRE AW section analysis also produced no significant findings in relation to the CPCE, despite the few previous studies that focused specifically on the AW sub section and suggested a potential value of the criterion for the field of counselor education (Halinski, 2009; Jackson-Cherry, 1998; Morrow, 1993). The Analytic writing section requires further

136

examination as it has been previously supported as a predictor of a student's overall success in a counselor education program, in addition to being linked to the future prediction of skill acquisition (Halinski, 2009; Morrow, 1993). Results of this study found that the GRE AW score accounted for a very small amount of variance (4%) on the CCS, indicating that other assessments need to be incorporated into the admissions process to account for these vital areas of counselor development.

Although the results of this study did not find a significant relationship between the UGPA variable and the prediction of future skills acquisition (as measured by the CCS), implications for counselor educators should encourage further examination of the UGPA in the prediction of skills. Past research has found a positive relation between the UGPA predictor and skills development, where GPA scores were found to be positively correlated with the Skilled Counselor Scale (SCS) assessment (Smaby et al., 2005). The authors explained that this significance could be explained by the effort and motivational factors that take place over time in order to obtain a satisfactory GPA may also be related to the same factors and persistence needed to develop clinical skills. Additionally, research investigating the UGPA in relation to the acquisition of clinical skills should use the entire undergraduate grade point average, as some programs rely on the UGPA score from only the last 60 hours of study. The entire undergraduate record may be more useful in predicting future skills, as the consistent effort it takes to maintain the grade point average from start to finish may be related to the ongoing efforts that are required for some students to develop counseling skills, professional dispositions, and professional behaviors (Smaby et al., 2005).

Overall, the findings from Analysis Two can assist in programmatic development and the student's professional development through addressing the selection of students with the highest potential to acquire clinical skills. Analysis two indicates that the use of the GRE and UGPA may be insufficient when it comes to the prediction of skills, dispositions, and behaviors. Admissions committees should review current application standards and select criteria that more accurately predict areas of skill prediction as "the likelihood of future success of graduate counseling students is paramount to determining both the viability of courses offered and the content presented by and within counselor education programs" (Schmidt et al., 2005, p. 227).

Implications from Analysis Two suggest that none of the four admissions criteria (GRE Verbal, Quantitative, Analytic Writing and UGPA) are of value in the prediction of counseling skills. Since it is the goal of counselor education programs to select capable individuals which will succeed not only as students, but as future professionals, the use of admissions criteria which accounts for all areas of future development should be used. Alternatives to the traditional criteria (GRE and UGPA) need to be incorporated into the admissions and screening process to assess applicants on areas outside of knowledge.   Personality characteristics, such as empathy, positive regard, and a genuine nature are all shown as contributing to a counselor's efficacy, and these traits should be screened for in the admissions process. If assessments to screen for these personal characteristics are not available, then future research should aim at developing these instruments. Interviews can also be used to screen for the areas of future development that the GRE and UGPA do not show predictive value in (Halinski, 2009).

Analysis Three

Analysis Three produced no significant findings, suggesting that there was not a relationship found between either CCS mid-term or final total scores or the outcome variable of the CPCE total score. Additionally, a post-hoc analysis examining the subscale scores of the CPCE (8) and the CCS (3) mid-term and final also failed to produce any significant results using a canonical correlation. These results indicate that the domain of knowledge is significantly different to the counseling skills, professional dispositions, and professional behaviors that are necessary in counselor development. Implications further support the need for criteria to be developed and implemented in the admissions process to account for these additional areas of development outside of the prediction of knowledge. While the GRE and UGPA can be used to predict knowledge (as measured by the CPCE), counseling skills, professional dispositions, and professional behaviors (as measured by the CCS) are not shown to be related to the CPCE, and therefore need separate measurements in the admission process.

Future Research

Future research should focus on improving the systems used in the screening and selection of counseling students. Studies should seek to examine the methods used in the admissions stage that accurately select the students with the greatest potential for success. Researchers could do this through an examination of the top-rated counselor education programs, to see what process and criteria they use to screen and select the best counselors (as evidenced by their outcome measures). The researcher included a brief review of admissions practices of top-ranked counselor education programs as ranked by US News report 2012. As previous research

139

indicated, the main program components consisted of the GRE and UGPA, for the top three programs. In addition to the use of the GRE and UGPA one or two additional criteria were used. Of the three top ranked programs, additional criteria included goal statements, and letters of recommendation. Based on a review of each of the department's admissions standards, none of the programs indicated the use of interviews or other personality based screening tools. Research on the leading counselor education programs should also include information on what criteria are used to rank the programs. It can be assumed that graduates of the top-ranked programs somehow make better clinicians, so how this determination is made would be of significance.

As an alternate to using outcome assessments that focus on the counselor's skills, future researchers could also look at admissions criteria in relation to client outcome scores. This could be done to create a more direct link between the admissions goal of selecting the best candidates for training and the counseling professions goal of trying to best serve the needs of clients. An additional outcome measure that was not incorporated into this study was the use of the admissions criteria in predicting graduate grade point average (Smaby et al., 2005). Graduate GPA scores are usually accessible and may provide information on graduate student's academic success in coursework. Future studies could also use this information to further support the notion that some students may achieve high scores in coursework (as evidenced by graduate GPA) but fail to develop in areas such as skills, professional dispositions and professional behaviors (as evidenced by skills assessment scores).

The value of interviews has gained support through recent studies examining the admission process in counselor education. This component of the application process may have

the greatest potential for assisting counselor educators in assessing students for the other areas of prediction that the GRE and UGPA miss. Alternate measures are often incorporated into the interview stage to examine the applicants on a more personal level (Leverett-Main, 2004). The faculty use the time to not only interview the applicant with basic questions, but to also assess them for other characteristics which cannot be evaluated by standardized tests or previous grades (Jackson-Cherry, 1998). While a lack of valid assessments exists in the field, future studies should focus on the development of assessments that can assist in quantifying the process.

The interview stage of the screening process provides vital insight into the applicant and may be the best opportunity to assess for the remaining areas of future competency (skills, professional dispositions, and professional behaviors) aside from knowledge. In addition to this, the face-to-face time also provides faculty with another opportunity to screen out weaker candidates. Future research on the interview process should also include information from the faculty and admissions committees who are involved in the screening of applicants. Vital information can be obtained from the experiences and frustrations of the interviewer and this information can be used to improve the interview process.

The significance of the GRE Analytic Writing component also needs to be studied further for the subject area's potential benefit to counselor education admissions processes, as past research has shown this subsection of the GRE to be useful in predicting a student's overall success in counselor education (Morrow, 1993). The results of this study and the review of literature indicate that there have been inconsistent results regarding the areas of prediction linked to the GRE AW. Halinski (2009) found promising preliminary evidence that the use of a personality screening assessment in combination with the GRE AW scores could be used to

141

predict a student's ability to master basic counseling skills early in their training program. Although this study did not produce significant results for the AW in the prediction of skills, behaviors, and dispositions, future research using alternate dependent variables to measure counselor performance may find significant results.

Test scores and previous grade point averages are not shown to be highly predictive of personal development. Because of this, additional measures of personal development at admission may be needed (Smaby et al., 2005). The use of personality-based screening assessments for the selection of counselors is an interesting area of focus. While there are a few inventories available that can be used to screen counselor education applicants, these measures need to be validated for reliable use as a prediction tool in the admissions process. Research should focus on the empirical evidence that already exists supporting the use of these admissions instruments.

In addition to these previous recommendations, it is the researcher's suggestion that counselor education departments look to the available university resources to assist in their research agenda. As demonstrated in this study, counselor education programs can benefit from a working relationship with the Office of Institutional Research, or equivalent. Most universities would have an office similar to the OIR and the information held by this department can be valuable to counselor educators conducting research. The working alliance with the OIR allowed the researcher to verify admissions scores and further validated the data used in the study.

Summary and Conclusion

It was the goal of the researcher to examine the admissions processes, and specifically the predictive value of the GRE and UGPA, in counselor education. The researcher's intention was not to criticize the GRE or UGPA; but rather to indicate the uses and limitations of these instruments in counselor education. In general, these tests are intended to provide a measure of aptitude (GRE) and past achievement (UGPA), thus predicting the future success of the applicant to do graduate level work. A review of literature uncovered past studies which specifically focused on the two admissions criterion and the instruments' limitations in counselor education.

Whereas, past research has concluded that the GRE and UGPA have value in predicting scores on the CPCE, studies such as the current one have questioned the two instruments value in the prediction of areas outside of knowledge (such as skills, behaviors and dispositions) (Ray, 2004; Jackson-Cherry, 1998; Morrow, 1993). Specifically, results of this study found significant correlations between the GRE and UGPA and students success on the CPCE, but did not find conclusive results when the two admissions criteria were examined with the CCS skills assessment. While the correlation between the admissions criteria and the CPCE was expected, there were some noteworthy findings between the admissions criteria and the skills assessment.

Future studies should continue to focus on improving the admissions process in counselor education. The topics of interviewing, and the incorporation of personality based screening assessments for use in admissions deserve further examination. An additional area of future research is the GRE-Analytic Writing component, which has shown some evidence of being predictive of a student's overall development, although there were not significant results found in this study.

143

By selecting the best candidates to enter the counseling profession, Counselor Educators have the ability to positively influence several aspects of the counseling and counselor education professions. Selecting students who possess the inherent qualities that are necessary for the profession means that the pedagogy used throughout Counselor Education will be put to better use. The accurate prediction of which applicants are best suited for a specific graduate program, "benefits the programs, the students, and society at large, because it allows education to be concentrated on those most likely to profit" (Kuncel & Hezlett, 2007, p. 1080).

The results of this study have implications that may encourage counselor education programs to reconsider their admissions standards. In an increasingly research driven field, counselor educators, committed to the development of the profession, need to be aware of the research findings and the potential to use this information to positively influence the field. The researcher encourages counselor educators to review their admissions processes and evaluate whether or not their standards are in line with empirically backed research.

APPENDIX
COUNSELOR COMPETENCIES SCALE

Counselor Competencies Scale (CCS) ©

Student's name_____   Please indicate: Practicum I or Practicum II student   **Final, Spring 2012**

Instructor's name_____

The *Counselor Competencies Scale* (CCS) assesses counseling students' skills development and professional competencies. Additionally, the CCS provides counseling students with direct feedback regarding their counseling skills, professional dispositions (dominant qualities), and professional behaviors, offering the students practical areas for improvement to support their development as effective and ethical professional counselors.

Scales Evaluation Guidelines

Exceeds Expectations / Demonstrates Competencies (8) = the counseling student demonstrates **strong** (i.e., *exceeding* the expectations of a beginning professional counselor) knowledge, skills, and dispositions in the specified counseling skill(s), professional disposition(s), and professional behavior(s).

Meets Expectations / Demonstrates Competencies (6) = the counseling student demonstrates **consistent** and **proficient** knowledge, skills, and dispositions in the specified counseling skill(s), professional disposition(s), and professional behavior(s). A beginning professional counselor should be at this level at the conclusion of his or her practicum and/or internship.

Near Expectations / Developing towards Competencies (4) = the counseling student demonstrates **inconsistent** and **limited** knowledge, skills, and dispositions in the specified counseling skill(s), professional disposition(s), and professional behavior(s).

Below Expectations / Insufficient / Unacceptable (2) = the counseling student demonstrates **limited** or **no evidence** of the knowledge, skills, and dispositions in the specified counseling skill(s), professional disposition(s), and professional behavior(s).

Harmful (0) = the counseling student demonstrates harmful use of knowledge, skills, and dispositions in the specified counseling skill(s), professional disposition(s), and professional behavior(s).

CACREP (2009) Standards relating to the *Counselor Competencies Scale* (CCS)

- Counselor characteristics and behaviors that influence helping processes (Section II, *Standard* 5.b.)
- Essential interviewing and counseling skills (Section II, *Standard* 5.c.)
- Self-care strategies appropriate to the counselor role (Section II, *Standard* 1.d.)
- The program faculty conducts a systematic developmental assessment of each student's progress throughout the program, including consideration of the student's academic performance, professional development, and personal development. Consistent with established institutional due process policy and the ACA *Code of Ethics* and other relevant codes of ethics and standards of practice, if evaluation indicate that s student is not appropriate for the program, faculty members help facilitate the student's transition out of the program and, if possible, into a more appropriate area of study (Section I, *Standard* P).
- Professional practice, which includes practicum & internship, provides for the application of theory & the development of counseling skills under supervision. These experiences will provide opportunities for students to counsel clients who represent the ethnic & demographic diversity of their community (Section III, *Professional Practice*).
- Students must complete **supervised practicum experiences** that **total a minimum of 100 clock hours** over a minimum 10-week academic term. Each student's practicum includes all of the following (Section III, *Standard* F. 1-5)
  1. At least **40 clock hours of direct service with actual clients** that contributes to the development of counseling skills.
  2. Weekly interaction that averages of **one hour per week of individual** and/or triadic supervision throughout the practicum by a program faculty member, a student supervisor, or a site supervisor who is working in biweekly consultation with a program faculty member in accordance with the supervision contract.
  3. An average of **1 ½ hours per week of group supervision** that is provided on a regular schedule throughout the practicum by a program faculty member or a student supervisor.
  4. The development of program-appropriate audio/video recordings for use in supervision or live supervision of the student's interactions with clients.
  5. Evaluation of the student's counseling performance throughout the practicum, including documentation of a formal evaluation after the student completes the practicum.

Directions: Evaluate practicum student's counseling skills, professional dispositions, & professional behaviors per rubric evaluation descriptions & record rating in the "score" column on the left.

Part I (Primary Counseling Skills – CACREP Standards [2009] #2 [*Social & Cultural Diversity*], #5 [*Helping Relationships*] & #7 [*Assessment*])

#	Score	Primary Counseling Skill(s)	Specific Counseling Descriptors	Exceeds Expectations / Demonstrates Competencies (8)	Meets Expectations / Demonstrates Competencies (6)	Near Expectations / Developing towards Competencies (4)	Below Expectations / Insufficient / Unacceptable (2)	Harmful (0)
1.A		Nonverbal Skills	Includes Body Position, Eye Contact, Posture, Distance from Client, Voice Tone, Rate of Speech, Use of silence, etc. (matches client)	Demonstrates effective nonverbal communication skills, conveying connectiveness & empathy (85%).	Demonstrates effective nonverbal communication skills for the majority of counseling sessions (70%)	Demonstrates inconsistency in his/her nonverbal communication skills.	Demonstrates limited nonverbal communication skills.	Ignores client &/or gives judgmental looks.
1.B		Encouragers	Includes Minimal Encouragers & Door Openers such as "Tell me more about...", "Hmm"	Demonstrates appropriate use of encouragers, which supports development of a therapeutic relationship (85%).	Demonstrates appropriate use of encouragers for the majority of counseling sessions (70%)	Demonstrates inconsistency in his/her use of appropriate encouragers.	Demonstrates limited ability to use appropriate encouragers.	Uses skills in a judgmental manner.
1.C		Questions	Use of Appropriate Open & Closed Questioning (e.g., avoidance of double questions)	Demonstrates appropriate use of open & close-ended questions, with an emphasis on open-ended question (85%).	Demonstrates appropriate use of open & close-ended questions for the majority of counseling sessions (70%).	Demonstrates inconsistency in using open-ended questions & may use closed questions for prolonged periods.	Uses open-ended questions sparingly & with limited effectiveness.	Multiple questions at one time
1.D		Reflecting a	Basic Reflection of Content – Paraphrasing	Demonstrates appropriate use of paraphrasing as the primary therapeutic approach (85%).	Demonstrates appropriate use of paraphrasing appropriately & consistently (70%).	Demonstrates paraphrasing inconsistently & inaccurately or mechanical or parroted responses.	Demonstrates limited proficiency in paraphrasing or is often inaccurate.	Judgmental, dismissing, &/or overshoots
1.E		Reflecting b	Reflection of Feelings	Demonstrates appropriate use of reflection of feelings as the primary approach (85%).	Student demonstrates appropriate use of reflection of feelings appropriately (70%).	Demonstrates reflection of feelings inconsistently and is not matching the client.	Demonstrates limited proficiency in reflecting feelings or often inaccurate.	Judgmental, dismissing, overshoots
1.F		Advanced Reflection (Meaning)	Advanced Reflection of Meaning including Values, and Core Beliefs (takes counseling to a deeper level)	Demonstrates consistent use of advanced reflection & promotes discussions of greater depth in sessions (85%).	Demonstrates ability to appropriately use advanced reflection, supporting increased exploration in session (70%).	Demonstrates inconsistent & inaccurate ability to use advanced reflection. Sessions appear superficial.	Demonstrates limited ability to use advanced or switches topics.	Judgmental, dismissing, &/or overshoots
1.G		Advanced Reflection (Summarizing)	Summarizing content, feelings, behaviors, and future plans	Demonstrates consistent ability to use summarization to include content, feelings, behaviors, and future plans.	Demonstrates ability to appropriately use summarization.	Demonstrates inconsistent & inaccurate ability to use summarization.	Demonstrates limited ability to use summarization.	Judgmental, dismissing, &/or overshoots
1.H		Confrontation	Counselor challenges client to recognize & evaluate inconsistencies.	Demonstrates the ability to challenge clients through verbalizing inconsistencies & discrepancies in the client's words or actions in a supportive fashion. Balance of challenge & support (85%).	Demonstrates the ability to challenge clients through verbalizing inconsistencies & discrepancies in the client's words or actions in a supportive fashion (can confront, but hesitant) (70%) or was not needed and therefore appropriately not used.	Demonstrates inconsistent ability to challenge clients through verbalizing inconsistencies & discrepancies in client's words or actions in a supportive fashion. Used minimally/missed opportunity.	Demonstrates limited ability to challenge clients through verbalizing discrepancies in the client's words or actions in a supportive & caring fashion, or skill is lacking.	Degrading client, harsh, judgmental, being aggressive
1.I		Goal Setting	Counselor collaborates with client to establish realistic, appropriate, & attainable therapeutic goals	Demonstrates consistent ability to establish collaborative & appropriate therapeutic goals with client (85%).	Demonstrates ability to establish collaborative & appropriate therapeutic goals with client (70%) or not appropriate and therefore appropriately not used.	Demonstrates inconsistent ability to establish collaborative & appropriate therapeutic goals with client.	Demonstrates limited ability to establish collaborative, appropriate therapeutic goals with client.	Not therapeutic goals
1.J		Focus of Counseling	Counselor focuses (or refocuses) client on his/her therapeutic goals – i.e., purposeful counseling	Demonstrates consistent ability to primarily focus/refocus counseling on client's goal attainment (85%).	Demonstrates ability to primarily focus/refocus counseling on client's goal attainment (70%) or not appropriate and therefore not used.	Demonstrates inconsistent ability to primarily focus/refocus counseling on client's therapeutic goal attainment.	Demonstrates limited ability to primarily focus/refocus counseling on client's therapeutic goal attainment.	Superficial, &/or moves focus away from client
1.K		Facilitate Therapeutic Environment a	Expresses accurate empathy & care. Counselor is "present" and open to client. (includes immediacy and concreteness)	Demonstrates consistent ability to be empathic & uses appropriate responses (85%).	Demonstrates ability to be empathic & uses appropriate responses (70%).	Demonstrates inconsistent ability to be empathic & use appropriate responses.	Demonstrates limited ability to be empathic & uses appropriate responses.	Creates unsafe space for client
1.L		Facilitate Therapeutic Environment b	Counselor expresses appropriate respect & unconditional positive regard	Demonstrates consistent ability to be respectful, accepting, & caring with clients (85%).	Demonstrates ability to be respectful, accepting, & caring with clients (70%).	Demonstrates inconsistent ability to be respectful, accepting, & caring.	Demonstrates limited ability to be respectful, accepting, & caring.	Conditional or negative

_____ : Total Score (*out of a possible 96 points*)   Practicum instructor's name_____

CCS 3

Part 2 (Professional Dispositions – CACREP Standards [2009] #1 [*Professional Orientation & Ethical Practice*] #2 [*Social & Cultural Diversity*], #3 [*Human Growth & Development*], & #5 [*Helping Relationships*])

#	Score	Primary Professional Dispositions	Specific Professional Disposition Descriptors	Exceeds Expectations / Demonstrates Competencies (8)	Meets Expectations / Demonstrates Competencies (6)	Near Expectations / Developing towards Competencies (4)	Below Expectations / Insufficient / Unacceptable (2)	Harmful (0)
2.A		Professional Ethics	Adheres to the ethical guidelines of the ACA, ASCA, & IAMFC, including practices within competencies.	Demonstrates consistent & advanced (i.e., *exploration & deliberation*) ethical behavior & judgments.	Demonstrates consistent ethical behavior & judgments.	Demonstrates ethical behavior & judgments, but on a concrete level with a basic decision-making process.	Demonstrates limited ethical behavior & judgment, and a limited decision-making process.	Repeatedly violates the ethical codes &/or makes poor decisions
2.B		Professionalism	Behaves in a professional manner towards supervisors, peers, & clients (includes appropriates of dress & attitudes). Able to collaborate with others.	Consistently respectful, thoughtful, & appropriate within all professional interactions.	Respectful, thoughtful, & appropriate within all professional interactions.	Inconsistently respectful, thoughtful, & appropriate within professional interactions.	Limitedly respectful, thoughtful, & appropriate within professional interactions.	Dresses inappropriately after discussed &/or repeatedly disrespects others, etc.
2.C		Self-awareness & Self-understanding	Demonstrates an awareness of his/her own belief systems, values, needs & limitations (herein called "beliefs") and the effect of "self" on his/her work with clients.	Demonstrates significant & consistent awareness & appreciation of his/her belief system & the influence of his/her beliefs on the counseling process.	Demonstrates awareness & appreciation of his/her belief system and the influence of his/her beliefs on the counseling process	Demonstrates inconsistent awareness & appreciation of his/her belief system and the influence of his/her beliefs on the counseling process.	Demonstrates limited awareness of his/her belief system and appears closed to increasing his/her insight.	Complete lack of self-awareness &/or imposes beliefs on client
2.D		Emotional stability & Self-control	Demonstrates emotional stability (i.e., congruence between mood & affect) & self-control (i.e., impulse control) in relationships with supervisor, peers, & clients.	Demonstrates consistent emotional resiliency & appropriateness in interpersonal interactions.	Demonstrates emotional stability & appropriateness in interpersonal interactions.	Demonstrates inconsistent emotional stability & appropriateness in interpersonal interactions.	Demonstrates limited emotional stability & appropriateness in interpersonal interactions.	Inappropriate interactions with others continuously, more emotional than client
2.E		Motivated to Learn & Grow / Initiative	Engaged in the learning & development of his/her counseling competencies.	Demonstrates consistent enthusiasm for his/her professional and personal growth & development.	Demonstrates enthusiasm for his/her professional and personal growth & development.	Demonstrates inconsistent enthusiasm for his/her professional and personal growth & development.	Demonstrates limited enthusiasm for his/her professional and personal growth & development.	Expresses lack of appreciation for the profession
2.F		Multicultural Competencies	Demonstrates awareness, appreciation, & respect of cultural difference (e.g., races, spirituality, sexual orientation, SES, etc.)	Demonstrates consistent & advanced multicultural competencies (knowledge, self-awareness, appreciation, & skills).	Demonstrates multicultural competencies (knowledge, self-awareness, appreciation, & skills).	Demonstrates inconsistent multicultural competencies (knowledge, self-awareness, appreciation, & skills).	Demonstrates limited multicultural competencies (knowledge, self-awareness, appreciation, & skills).	Not accepting worldviews of others
2.G		Openness to Feedback	Responds non-defensively & alters behavior in accordance with supervisory feedback	Demonstrates consistent openness to supervisory feedback & implements suggested changes.	Demonstrates openness to supervisory feedback & implements suggested changes.	Demonstrates openness to supervisory feedback, but does not implement suggested changes.	Not open to supervisory feedback & does not implement suggested changes.	Defensive &/or disrespectful when given feedback
2.H		Professional & Personal Boundaries	Maintains appropriate boundaries with supervisors, peers, & clients	Demonstrates consistently strong & appropriate boundaries.	Demonstrates appropriate boundaries.	Demonstrates appropriate boundaries inconsistently.	Demonstrates inappropriate boundaries.	Harmful relationship with others
2.I		Flexibility & Adaptability	Demonstrates ability to flex to changing circumstance, unexpected events, & new situations	Demonstrates consistently strong ability to adapt & "reads-&-flexes" appropriately.	Demonstrates ability to adapt & "reads-&-flexes" appropriately.	Demonstrated an inconsistent ability to adapt & flex to his/her clients.	Demonstrates a limited ability to adapt & flex to his/her clients.	Not at all flexible, rigid
2.J		Congruence & Genuineness	Demonstrates ability to be present and "be true to oneself"	Demonstrates consistent ability to be genuine & accepting of self & others.	Demonstrates ability to be genuine & accepting of self & others.	Demonstrates inconsistent ability to be genuine & accepting of self & others.	Demonstrates a limited ability to be genuine & accepting of self & others (incongruent).	Incongruent and not genuine

_____: Total Score (*out of a possible 80 points*)   Practicum instructor's name_____

148

Part 3 (Professional Behaviors – CACREP Standards [2009] #1 [*Professional Orientation & Ethical Practice*]**, #3** [*Human Growth & Development*]**, & #5** [*Helping Relationships*]**, #7** [*Assessment*]**, & #8** [*Research & Program Evaluation*]**)**

#	Score	Primary Professional Behavior(s)	Specific Professional Behavior Descriptors	Exceeds Expectations / Demonstrates Competencies (8)	Meets Expectations / Demonstrates Competencies (6)	Near Expectations / Developing towards Competencies (4)	Below Expectations / Insufficient / Unacceptable (2)	Harmful (0)
3.A		Attendance & Participation	Attends all course meetings & clinical practice activities in their entirety (engaged & prompt).	Attends all class meetings & supervision sessions in their entirety, is prompt, & is engaged in the learning process.	Misses one class meeting &/or supervision session & is engaged in the learning process & is prompt.	Misses two class meetings &/or supervision sessions, &/or is late at times, but is engaged in the learning process.	Misses more than two class meetings &/or supervisions sessions, &/or is often late, & is not engaged in the learning process.	Misses 4 or more classes or sessions &/or repeatedly late &/or not engaged.
3.B		Knowledge & Adherence to Site Policies	Demonstrates an understanding & appreciation for all counseling site policies & procedures	Demonstrates consistent adherence to all counseling site policies & procedures.	Demonstrates adherence to most counseling site policies & procedures.	Demonstrates inconsistent adherence to all counseling site policies & procedures.	Demonstrates limited adherence to all counseling site policies & procedures.	Failure to adhere to policies after discussed with supervisor.
3.C		Record Keeping and task completion	Completes all weekly record keeping & tasks correctly & promptly (e.g., case notes, psychosocial , TX plan, supervision report).	Completes all required record keeping, documentation and assigned tasks in a through & comprehensive fashion.	Completes all required record keeping, documentation, and tasks in a competent fashion.	Completes all required record keeping, documentation, and tasks, but in an inconsistent & questionable fashion.	Completes required record keeping, documentation, and tasks inconsistently & in a poor fashion.	Failure to complete paperwork &/or tasks by deadline.
3.D		Knowledge of professional literature	Researches therapeutic intervention strategies that have been supported in the literature & research.	Demonstrates initiative in developing strong knowledge of supported therapeutic approaches grounded in the counseling literature & research.	Demonstrates knowledge of supported therapeutic approaches grounded in the counseling literature & research.	Demonstrates inconsistent knowledge of supported therapeutic approaches grounded in the counseling literature/research.	Demonstrates limited knowledge of supported therapeutic approaches grounded in the counseling literature & research.	No attempt to obtain literature to support interventions.
3.E		Application of Theory to Practice	Demonstrates knowledge of counseling theory & its application in his/her practice.	Demonstrates a strong understanding of the counseling theory(ies) that guides his/her therapeutic work with clients.	Demonstrates an understanding of the counseling theory(ies) that guides his/her therapeutic work with clients.	Demonstrates inconsistent understanding of the role of counseling theory in his/her therapeutic work.	Demonstrates limited understanding of counseling theory & its role in his/her therapeutic work with clients.	Harmful use of theoretical principles.
3.F		Case Conceptualization	Effectively presents & summarizes client history & demonstrates an appreciation of the multiple influences on a client's level of functioning	Demonstrates a strong & comprehensive case conceptualization; appreciating the multiple influences on a client's level of functioning.	Demonstrates an comprehensive case conceptualization; appreciating the multiple influences on a client's level of functioning.	Demonstrates basic case conceptualization; appreciating only the influences a client presents in session on his/her level of functioning.	Demonstrates a limited case conceptualization & does not appreciate the influence of systemic factors on the client's level of functioning.	Focus on self without ability to understand client.
3.G		Seeks Consultation	Seeks consultation & supervision in appropriate service delivery	Takes initiative to consistently seek appropriate consultation & supervision to support the delivery of counseling services.	Seeks appropriate consultation & supervision to support the delivery of counseling services.	Inconsistently seeks consultation & supervision to support the delivery of counseling services.	Seeks limited consultation & supervision to support the delivery of counseling services.	Does not recognize need for or seek supervision.
3.H		Psychosocial & Treatment Planning	Demonstrates ability to construct a comprehensive & appropriate psychosocial report & treatment plan.	Ability to construct & adhere to a comprehensive & appropriate psychosocial report & treatment plan (e.g., goals are relevant, attainable, & measureable)	Demonstrates the ability to construct a comprehensive & appropriate psychosocial report & treatment plan.	Demonstrates an inconsistent ability to construct a comprehensive & appropriate psychosocial report & treatment plan.	Demonstrates a limited ability to construct a comprehensive & appropriate psychosocial report & treatment plan.	Harmful goals or gaps in psychosocial
3.I		Appraisal	Demonstrates ability to appropriately administer, score, & interpret clinical assessments	Demonstrates a strong ability to appropriately administer, score, & interpret assessment instruments.	Demonstrates ability to appropriately administer, score, & interpret assessment instruments.	Demonstrates an inconsistent ability to appropriate administer, score, & interpret assessment instruments.	Demonstrates a limited ability to appropriately administer, score, & interpret assessment instruments.	Assessment not reviewed or understood or labeling client
3.J		Referral	Demonstrates ability to identify resources to assist client therapeutically during and following counseling	Takes initiative to identify resources that may further assist client in reaching treatment goals.	Seeks out resources when recommended by supervisor or others.	Needs prompting to identify and find resources	Inconsistently follows through with assisting client with identifying resources.	Refuses to assist client with identifying resources.

_____ : **Total Score** (*out of a possible 80 points*)   Practicum   instructor's name_____

Narrative Feedback from Supervising Instructor

Please note the counseling student's areas of strength, which you have observed:

Please note the counseling student's areas that warrant improvement, which you have observed:

Please comment on the counseling student's general performance during his/her clinical experience to this point:

Counseling Student's Name (print)	Date
Supervising Instructor's Name (print)	Date

Date CCS was reviewed with Counseling Student – _____

Counseling Student's Signature	Date
Supervising Instructor's Signature	Date

* *Note*. If Supervising Instructor is <u>concerned</u> about the Counseling Student's progress, he or she should complete the *Counseling Depth Scale* (Young, 2007) to provide additional feedback to the Counseling Student.

REFERENCES

Aiken, L. S., West, S. G., & Pitts, S. C. (2003). Multiple linear regression. In J. Schinka & W. Velicer (Eds.), *Handbook of Psychology* (Vol. 2). *Research Methods in Psychology* (pp. 483-507). New York: Wiley.

Alberts, G., & Edelstein, B. (1990). Therapist training; A critical review of skill training studies. *Clinical Psychology Review, 10*, 497-511.

American Counseling Association. (2005). *ACA code of ethics.* Retrieved June 8, 2011, from http://www.counseling.org/Resources/CodeofEthics/TP/HOME/CT2.aspx.

America's Best Colleges. (2012). *US News & World Report,* Retrieved June 12, 2012, from http://www.usnews.com/usnews/rankguide/rghome.htm.

Ascher, D. (2011). *A phenomenological investigation of counseling students' and practicum supervisors' experiences with the Counselor Competencies Scale*. PhD. Dissertation, University of Central Florida – Florida. Retrieved June 6th, 2011, from Dissertation & Theses: Full Text.

Baker, S. B. & Daniels, T. G. (1989). Integrating research on the microtraining program; A meta-analysis. *Journal of Counseling Psychology, 36*, 213-222.

Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education.* Chicago: University of Chicago Press.

Bemak, F., Epp, L. R., & Keys, S. G. (1999). Impaired graduate students: A process model of graduate program monitoring and intervention. *International Journal for the Advancement of Counseling, 21*, 19-30.

Bing, M. N., Whanger, J. C., Davison, H. K., & VanHook, J. B. (2004). Incremental validity of

the frame-of-reference effect in personality scale scores: A replication and extension.

Journal of Applied Psychology, 89, 150–157.

Blow, A. J., Sprenkle, D. H., & Davis, S. D. (2007). Is who delivers the treatment more

important than the treatment itself? The role of the therapist in common factors. *Journal

of Marital and Family Therapy, 33*, 298–317.

Bradley, J., & Post, P. (1991). Impaired students: Do we eliminate them from counselor

education programs. *Counselor Education and Supervision, 31*, 100-108.

Brear, P., & Dorrian, J. (2010). Gatekeeping or gate slippage? A national survey of counseling

educators in Australian undergraduate and postgraduate academic training program.

Training and Education in Professional Psychology, 4, 264–273.

Brear, P., Dorrian, J., & Luscri, G. (2008). Preparing our future counseling professionals:

Gatekeeping and the implications for research. *Counseling and Psychotherapy Research,

8,* 93–101.

Briihl, D. & Wasieleski, D. (2007). The GRE test: Description and utilization. *Teaching of

Psychology*, *34*, 191-193.

Bureau of Labor Statistics, U.S. Department of Labor, *2012–2013 Occupational Outlook

Handbook*, [May 25, 2012] [http://www.bls.gov/ooh/].

Burnsed, B. (2010) GRE is quickly becoming a GMAT alternative for b-school applicants. *US

News and World Report*. May, 14 2010 22.

Burton, N. W. & Wang, M. M. (2005) *Predicting long-term success in graduate school: A collaborative study*. GRE Board Report No. 99-14R ETS RR-05-03. Princeton N.J: Educational Testing Service. Retrieved January 10, from http://www.ets.org/Media/Research/pdf/RR-05-03.pdf.

Camara, W. J., & Echternacht, G. (2000). The SAT I and high school grades: Utility in predicting success in college. Research Notes RN-10, The College Board, Office of Research and Development.

Cates, J. T, Shaefle, S. E., Smaby, M. H., Maddux, C. D., & LaBeauf, I. (2007). Comparing multicultural with general counseling knowledge and skill competency for students who completed counselor training. *Journal of Multicultural Counseling and Development*, *35*, 26-39.

Casey, R. P. (2011). Prepared testimony before the joint economic committee hearing on the Economic Outlook, December 16, 2012.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155–159.

Center for Credentialing and Education. (2006). *The counselor preparation comprehensive examination.* Retrieved July 6, 2005, from http://www.cceglobal.org/cpce.htm.

Council for Accreditation of Counseling and Related Educational Programs. (2009). *CACREP accreditation standards and procedures manual.* Alexandria, VA: Author.

Council for Accreditation of Counseling and Related Educational Programs. (2001). *CACREP accreditation manual: 2001 standards.* Alexandria, VA: Author.

Daughhetee, C., Puleo, S. G., & Thrower, E. E. (2010). Scaffolding of continuing competency as

    an essential element of professionalism. *The Alabama Counseling Association Journal,*

    36, 15-22.

Educational Testing Service. (2004). *What is the value of the Graduate Record Examinations?*

    Princeton, NJ: Author. Retrieved June 16, 2004, from

    http://ftp.ets.org/pub/gre/grevalue.pdf.

Eriksen, K., & McAuliffe, G. (2003). A measure of counselor competence. *Counselor Education*

    and Supervision 43, 120-133.

Etaugh, A. F., Etaugh, C. F., Hurd, D. E. (1972). Reliability of college grades and grade point

    averages: Some implications for prediction of academic performance. *Educational and*

    Psychological Measurement, 32, 1045-1050.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analysis using

    G*Power 3.1: Test for correlation and regression analyses. *Behavior Research Methods*,

    41, 1149–1160.

Feeley, T. H., Williams, V. M., and Wise, T. J. (2005). Testing the predictive validity of the

    GRE exam on graduate student success: a case study at university of buffalo.

    Communication Quarterly, 5, 229-245.

Fortna, R. (1980). *Annotated bibliography of: the graduate record examinations*. ERIC

    Clearinghouse on Tests, Measurement and Evaluation, Princeton, N. J.

Foster, V. A., & McAdams, C. R., III. (2009). A framework for creating a climate of

    transparency for professional performance assessment: Fostering student investment in

    gatekeeping. *Counselor Education and Supervision, 48*, 271-284.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction.* White

    Plains, NY: Longman.

Gazda, G., Asbury, F. R., Balzer, F. J., Childers, W. C., & Phelps, R. E. (1999). *Human relations*

    development: A manual for educators. Boston: Allyn & Bacon.

Gimmestad, M. J., & Goldsmith, E. B. (1973). Admissions policies for graduate programs in

    counselor education. *Counselor Education and Supervision, 12*, 172-177.

Graziano, A. M. & Raulin, M. L. (2000). *Research methods: A process of inquiry* (4th ed.).

    Boston: Allyn & Bacon.

Guarion, A. J. (2004). A comparison of first and second generation multivariate analysis:

    Canonical correlation analysis and structural equation modeling. *Florida Journal of*

    Education Research, 42, 22-40.

Hackney, H., & Cormier, S. (1994). *Counseling strategies and interventions* (4th ed.). Boston:

    Allyn & Bacon.

Hagedorn, L. S., & Nora, A. (1996). Rethinking admissions criteria in graduate and professional

    programs. In J. G. Haworth (Ed.), *Assessing graduate and professional education:*

    Current realities, future prospects (pp. 31–44). San Francisco: Jossey-Bass.

Halinski, K. (2009). Predicting beginning master's level counselor effectiveness from personal

    characteristics and admissions data: an exploratory study. PhD. Dissertation, University

    of North Texas. Retrieved June 6th, 2011, from Dissertation & Theses: Full Text.

Hardoon, D. R., Szedmak, S., and Shawe-Taylor, J., (2004) Canonical correlation analysis: an

    overview with application to learning methods. *Neural Computation, 16*, 2639–2664.

Harvancik, M. J., & Golsan, G. (1986). *Graduate record examination scores and grade point averages: Is there a relationship?* Paper presented at the Annual Convention of the American Association for Counseling and Development. Los Angeles.

Henderson, D. A. (2005) Presidential address: Vanguards of Change. *Journal of Counselor Education and Supervision, 44,* 162-165.

Hill, C. E. (2004). *Helping skills: Facilitating exploration, insight, and action (*2nd ed.). Washington DC: American Psychological Association.

Hollis, J. W., & Dodson, T. A. (2000). *Counselor preparation* (10th ed.). Philadelphia: Accelerated Development.

Homrich, A. M. (2009). Gatekeeping for personal and professional competence in graduate counseling programs. *Counseling and Human Development, 41* (7), 1-23.

Horvath, A. O., & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counseling Psychology*, 38, 139-149.

Hubble, M., Duncan, B., & Miller, S. (1999). *The heart and soul of change: What works in therapy.* Washington, DC: American Psychological Association.

Ingram, R., E., (1980) The GRE in graduate admissions process: Is how it is used justified by the evidence of its validity? *Professional Psychology: Research and Practice*, *14*, 711-714.

Ivey, A. E., & Ivey, M. B. (2003). *Intentional interviewing and counseling: Facilitating client development in a multicultural society.* Pacific Grove, CA: Brooks/Cole.

Jackson-Cherry, L. (1998). Assessing the predictability of Graduate Record Examinations and undergraduate grade point averages on counseling skill development and graduate school success in Counselor Education. PhD. Dissertation, University of South Carolina.

Retrieved June 6th, 2011, from Dissertation Abstracts International, (UMI Number: 9833208).

Kaslow, N. J. (2004). Competencies in professional psychology. *American Psychologist, 59,* 774–781.

Keppers, G. (1960). Selection of graduate students in guidance and counseling. *Vocational Guidance Quarterly, 9,* 90-94.

Kerl, S. B., Garcia, J. L., McCullough, C. S., & Maxwell, M. E. (2002). Systematic evaluation of professional performance: Legally supported procedure and process. *Counselor Education and Supervision, 41,* 321–334.

Kuncel, N. R., & Hezlett, S. A. (2007). Standardized tests predict graduate students' success. *Science, 315,* 1080–1081.

Kuncel, N. R., Hezlett, S. A., & Ones, D. S. (2001). A comprehensive meta-analysis of the predictive validity of the Graduate Record Examinations: Implications for graduate student selection and performance. *Psychological Bulletin, 127,* 162–181.

Kuncel, N., Crede, M., Thomas, L. (2007). A meta-analysis of the predictive validity of the graduate management admission test (GMAT) and undergraduate grade point average (UGPA) for graduate student academic performance. *Academy of Management Learning & Education*, *6*, 51–68.

Kuncel, N. R., Wee, S., Serafin, L. & Hezlett, S. A. (2010). The validity of the graduate record examination for master's and doctoral programs: A meta-analytic investigation. *Educational and Psychological Measurement, 70(2),* 340-352.

Lamadue, C., & Duffy, T. (1999). The role of graduate programs as gatekeepers: A model for

    evaluating student counselor competence. *Counselor Education and Supervision*, 39, 2,

    101-110.

Leverett-Main, S. (2004). Program directors' perceptions of admission screening measures and

    indicators of student success. *Counselor Education & Supervision, 43*, 207-219.

Markert, L. F., & Monke, R. H. (1990). Changes in counselor education admissions criteria.

    Counselor Education & Supervision, 30(1), 48.

Martin, D. J., Garske, J. P., & Davis, K. M. (2000). Relation of the therapeutic alliance with

    outcome and other variables: A meta-analytic review. *Journal of Clinical and Consulting*

    Psychology, 68, 438-450.

    Marshall, M.N. (1996). Sampling for qualitative research. *Family Practice, 13*, 522-528.

McAdams, C. R., Foster, V. A., & Ward, T. J. (2007). Remediation and dismissal policies in

    counselor education: Lessons learned from a challenge in federal court. *Counselor*

    Education and Supervision, *46*(3), 212-229.

McKeachie, W. J., & Svincki, M. (2006). *Teaching tips: Strategies, research, and theory for*

    college and university teachers (12th ed.). New York: Houghton-Mifflin.

McKee, J. E., Smith, L. W., Hayes, B. G., Stewart, A., & Echterling, L. G. (1999). Rites and

    rituals in Counselor Education. *Journal of Humanistic Counseling, Education, and*

    Development, 38, 3-12.

McLennan, J. (1994). The skills-based model of counseling training: A review of the evidence.

    Australian Psychologist, 29, 79-88.

Monahan, T. C. (1991) Using graduate record examination scores in the graduate admissions

 process at Glassboro State College. (Report No. HE-024–296). (ERIC Document

 Reproduction Service No. ED 329 183).

Morrow, J. M. (1993, October). *Revision, validation, and follow-up of admissions standards in*

 counselor education. Paper presented at the meeting of the Southern Association for

 Counselor Education and Supervision Convention, Charleston, SC. (ERIC Document

 Reproduction Service No. ED388 893)

Mountford, M., Ehlert, M., Machell, J., & Cockrell, D. (2007). Traditional and personal

 admissions criteria: Predicting candidate performance in US educational leadership

 programmes. *International Journal of Leadership in Education, 10*(2), 191-210.

Nagpal, S., & Ritchie, M. (2002). Selection interviews of students for master's programs in

 counseling: an exploratory study. *Counselor Education and Supervision, 41(3*), 207.

Patterson, C. H. (1984). Empathy, warmth, and gaminess in psychotherapy: A review of reviews.

 Psychotherapy, 21, 431-438.

 Petrocelli, J. V. (2003). Hierarchical multiple regression in counseling research: Common

 problems and possible remedies. *Measurement and Evaluation in Counseling and*

 Development, 36, 9-22.

Ponterotto, J. G., & Furlong, M. J. (1985). Evaluating counselor effectiveness: A critical review

 of rating scale instruments. *Journal of Counseling Psychology, 32*, 597-616.

Powers, D. E. (2004). Validity of graduate record examinations (GRE) general test scores for

 admissions to college of veterinary medicine. *Journal of Applied Psychology, 89*(2), 208–

 219.

Procidano, M. E., Busch-Rossnagel, N. A., Reznikoff, M., & Geisinger, K. F. (1995). Responding to graduate students' professional deficiencies: A national survey. *Journal of Clinical Psychology, 51*, 426-433.

Ray, S. (2004). *An investigation of master's level counseling students' clinical efficacy: The relationship between graduate record examination scores and demonstration of clinical skills in practicum.* PhD. Dissertation, University of Central Florida. Retrieved June 6th, 2011, from Dissertation & Theses: Full Text.

Rogers, C. (1961). *On Becoming a Person.* London, Constable.

Ronnestad, M. H., & Orlinsky, D. E., (2005). Clinical implications: Training, supervision, and practice. In D. E. Orlinsky & M. H. Ronnestad (Eds.), *How psychotherapists develop: A study of therapeutic work and professional growth.* Washington DC: American Psychological Association.

Rosenfeld, M., Courtney, R., & Fowles, M. (2004). *Identifying the writing tasks important for academic success at the undergraduate and graduate levels.* Princeton, NJ: Educational Testing Service.

SAS (2002). Building a Data Warehouse Using SAS/Warehouse Administrator®, Software Course Notes (Book code58787). SAS Institute Inc., Cary, NC 27513, USA.

Schaeffer, G. A., Briel, J. B., & Fowles, M. E. (2001). *Psychometric evaluation of the new GRE Writing Assessment* (GRE Report No. 96-11P, ETS RR-01-08). Princeton, NJ: Educational Testing Service.

Schmidt, E. A., Homeyer, L. E., & Walker, J. (2009). Predictors of success on the counselor

      preparation comprehensive exam. *Counselor Education and Supervision, 48*(4), 226-238.

Shaw, B. F., & Dobson. K. S. (1988). Competency judgments in the training and evaluation of

      psychotherapists. *Journal of Consulting and Clinical Psychology, 56*, 666-672.

Sherry, A., & Henson, R. (2005). Conducting and interpreting canonical correlation analysis in

      personality research: A user-friendly primer. *Journal of Personality Assessment, 84,* 37-

      48.

Shirk, S. R., & Karver, M. (2003). Prediction of treatment outcome from relationship variables in

      child and adolescent therapy: A meta-analytic review. *Journal of Consulting and Clinical*

      Psychology, 71, 452–464.

      Smaby, M. H., Maddux, C. D., & Richmond, A. S., Lepkowski, W. J., & Packman, J.

      (2005). Academic admission requirements as predictors of counseling knowledge,

      personal development, and counseling skills. *Counselor Education and Supervision, 45,*

      43-57.

Smith, J. (2004). Assessing prospective students for master's level CACREP counseling

      programs: Evaluation of personal-emotional characteristics, PhD. Dissertation, Virginia

      Polytechnic Institute and State University - Virginia. Retrieved January 18th, 2012, from

      Dissertation Abstracts International Section A: Humanities and Social Sciences.

Sternberg, R. J., & Williams, W. W. (1997). Does the graduate record examination predict

      meaningful success in the graduate training of psychologists? *American Psychologist,*

      52(6), 630–641.

Strupp, H. H., (1986). Psychotherapy: Research, practice, and public policy (how to avoid dead ends). *American Psychologist, 41*, 120-130.

Swank, J. (2010). *Assessing the psychometric properties of the Counseling Competencies Scale: A measure of counseling skills, dispositions, and behaviors.* PhD. Dissertation, University of Central Florida – Florida. Retrieved December 3rd, 2011, from Dissertation & Theses: Full Text.

Swank, J. M., Lambie, G. W., & Witta, E. L. (2012). The counseling competencies scale: A measure of counseling skills, dispositions, and behaviors. *Counselor Education & Supervision, 51*, 189-206.

Tabachnick, B. G., Fidell, L. S. (1996). *Using multivariate statistics (3rd ed.).* New York: Harper Collins College Publishers.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Harper Collins.

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research, 1*, 77-100.

Thompson, B. (1991). A primer on the logic and use of canonical correlation analysis. *Measurement and Evaluation in Counseling and Development, 24*, 80-95.

University of Central Florida Counselor Education Faculty (2004). *Counselor Skills and Professional Behavior Scale (CSPBS).* Correspondence regarding the CSPBS should be addressed to Mark E. Young at: meyoung@mail.ucf.edu

Urbani, S., Smith, M. R., Maddux, C. D., Smaby, M. H., Torres-Rivera, E., & Crews, J. (2002). Skills-based training and counselor self-efficacy. *Counselor Education and Supervision, 42,* 92–106.

Wah, D. M., & Robinson, D. S. (1990). *Examinee and score trends for the GRE general test: 177-78, 1982-83, 1986-87, and 1987-88.* Princeton, NJ: Educational Testing Service.

Walton, F., & Sweeney, T. (1969). Useful predictors of counselor effectiveness. *The Personnel and Guidance Journal, 48*, 32-38.

Wellman, R. E. (1955). Selection of students for preparation in college personnel work. *The Personnel and Guidance Journal, 43*, 24-27.

Wilbur, M. P. (1991). *Counselor skills and personal development rating form.* Unpublished assessment instrument, University of Connecticut: Storrs.

Young, M. E. (2009). *Learning the art of helping: Building blocks and techniques* (4th ed.). Upper Saddle River, NJ: Pearson Education.

Young, R. B. (1986). An exploratory study of admissions information and success in a preparation program for student personnel workers. *Journal of College and Student Personnel, 27*, 131-136.

Ziomek-Daigle, J., & Christensen, T. (2010). An emergent theory of gatekeeping practices in counselor education. *Journal of Counseling and Development, 88,* 407-415.