AN ANALYSIS OF THE RELATIONSHIP BETWEEN THE SCHOLARLY ACTIVITY OF COUNSELOR EDUCATION DOCTORAL STUDENTS AND INTRINSIC VERSUS EXTRINSIC GOAL ASPIRATIONS

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This dissertation entitled

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INTRINSIC VERSUS EXTRINSIC GOAL ASPIRATIONS

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Abstract

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AN ANALYSIS OF THE RELATIONSHIP BETWEEN THE SCHOLARLY ACTIVITY OF COUNSELOR EDUCATION DOCTORAL STUDENTS AND INTRINSIC VERSUS EXTRINSIC GOAL ASPIRATIONS (158 pp.)

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The purpose of the study was to investigate the relationship between doctoral student scholarly activity and intrinsic versus extrinsic goal aspirations. The objective self-report and perceptions of doctoral students were examined on frequency and importance of scholarly activity and length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context.

The sample of 102 participants were surveyed on frequency and 103 participants surveyed on perceived importance of scholarly activity (Boyer, 1990; Glassick, Huber, Maeroff, 1997), length of time in doctoral program (Kahn & Scott, 1997), intrinsic and extrinsic goal aspirations (Kasser & Ryan, 1996), and social context (Williams & Deci, 1996). Demographics questionnaire provided data on counselor education doctoral students. Hierarchical regression analysis was used to analyze data. Results revealed that length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context combined to significantly predict frequency of scholarly activity, although length of time in doctoral program explained 7.8% of the variance. This analysis revealed a significant relationship between frequency and social context. Results indicated that as frequency of scholarly activity increased, length of time in doctoral program decreased. A second hierarchical regression analysis was conducted that revealed the four predictors
combined can significantly predict importance of scholarly activity. Social context was the strongest significant predictor in the equation. Results indicated as social context scores increased, the importance of scholarly activity increased.

Supplemental analysis revealed (a) statistically significant correlation between frequency and length of time in doctoral program, (b) statistically significant correlation between intrinsic goal aspirations and importance, (c) statistically significant correlation between intrinsic goal aspirations and social context, (d) significant differences in frequency and doctoral students in CACREP accredited programs, (e) significant differences in social context and doctoral students in non-CACREP accredited programs.

Findings support the importance of doctoral student involvement in scholarly activity and autonomy-supportive social contexts to facilitate intrinsic motivation that enhances performance, persistence, and development. The research provides demographic data on doctoral students. A discussion of the pilot study results, survey instruments, hierarchical regression analysis, supplemental analysis, implications of the study and directions for future research are presented.

Approved:

Thomas E. Davis
Professor of Education
Acknowledgments

I dedicate this work to my mom, for extending unconditional love, challenging me to be my best, and never judging me regardless of my decisions in life. I have been forever transformed by your endless unselfishness. I strive to be half the individual you are to me. To my dad, your determination to be successful regardless of the circumstance has had a profound impact on my life. Your passion for life has encouraged me to keep persevering. You are my hero. For my brother, my partner in crime, you have enriched my life with your strength and provided me with knowledge. You are one of my best friends. Finally, this work is dedicated to the life of one of my mentors, Dr. Patrick Riley, MD, for his vision of integrated health care, his passion for human life, and his endless devotion to his friends. You will always live in my heart.

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CHAPTER I: INTRODUCTION

The following introduction presents a rationale for the research, the statement of the problem, research hypothesis, significance, limitations and delimitations, and definitions of terms in the study.

The purpose of this study is to determine the relationship between the frequency and perceived importance of the scholarly activity of counselor education doctoral students, length of time in doctoral program, and intrinsic versus extrinsic goal aspirations. Additionally, the purpose is to determine if the social contexts of doctoral programs support students’ autonomy, enhancing motivation and performance of scholarship. Does the length of time in doctoral program, pursuit of intrinsic versus extrinsic goal aspirations and the social context of doctoral programs influence the frequency of scholarly activity? Does the length of time in doctoral program, pursuit of intrinsic versus extrinsic goal aspirations and the social context of doctoral programs influence the perceived importance of scholarly activity? While there has been research on the scholarly productivity of counselor education faculty (Ramsey, Cavallaro, Kiselica, & Zila, 2002; Walton, 1982), graduates of doctoral programs (Jarvis, 1992; Olsen & Sorcinelli, 1992), and the scholarly research of doctoral students (Kahn, 2001), literature related to the frequency and perceived importance of doctoral student scholarly activity is relatively non-existent. It is important to study this topic for several reasons. Increasing the involvement of doctoral students in counselor education programs in scholarly activities is a desirable goal. The accumulating research base in counselor education and supervision represents a primary mechanism of informing education, supervision, and clinical practice as well as advancing the profession. The importance of
scholarship to the advancement of the profession may suggest to counselor educators that efforts need to be focused on increasing scholarly activity of doctoral students. The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2001) doctoral preparation standards include preparing scholars and leaders in a context of scholarly inquiry focused on the forms of scholarship including research, teaching, and service to the counseling profession. The CACREP (2001) doctoral preparation standards are the minimal criteria for preparing doctoral students as counselor educators and advanced clinicians. This study may generate revisions for an increase in specificity of standards of doctoral level scholarship for CACREP accredited doctoral preparation programs. Obtaining a tenure track faculty position is a competitive process (Warnke, Bethany, & Hedstrom, 1999) and scholarly productivity is used as criteria for promotion and tenure (Sorcinelli, 1994). Research is warranted to determine the frequency and perceived importance of scholarly activity at the doctoral level.

In addition, focusing on the forms of scholarship and influencing doctoral student scholarly development may promote increased scholarship and motivation to pursue scholarly endeavors. Beyond the traditional definition of scholarship that implies an emphasis on research, the definition has been expanded (Glassick, Huber, & Maeroff, 1997). Boyer’s model (1990) was the conceptual framework used in this study to define doctoral student scholarly activity. The scholarship of discovery, integration, application, and teaching are defined as divided intellectual functions that are inseparable (Boyer, 1990). The purpose of the four forms of scholarship was to define standards to interpret the evaluation of faculty scholarship (Glassick, Huber, & Maeroff, 1997). Counselor
education preparation programs with a curriculum focus on scholarship may enhance the
development of scholars, advance the profession, and strengthen professional identity.

To continue to establish counselor education as a distinct profession, identifying,
defining, and measuring what constitutes scholarship is critical (Zimpfer, Mohdzain,
West, & Bubenzer, 1992). Increasing the pursuit of scholarly activity at the doctoral level
may define criteria for scholarship specific to counselor education, provide increased
scholarly experiences for doctoral students similar to those required of tenure track
faculty, and advance the counseling profession through doctoral student research.
Doctoral programs in counselor education have infused scholarship into curriculum using
the scholarship of discovery, scholarship of integration, scholarship of application, and
the scholarship of teaching as a means for defining what it means to be a scholar (Boyer,
1990).

*Scholarship of Discovery*

Scholars in academia refer to the scholarship of discovery as research. The
discovery process, the research outcomes, and the essence of research or the pursuit of
knowledge enhances the intellectualism of the social context and expands human
knowledge (Boyer, 1990; Glassick, Huber, & Maeroff, 1997). Active research agendas in
doctoral study can ignite passion for investigation, generate knowledge, and contribute to
the counseling professions research base.

*Scholarship of Integration*

The scholarship of integration is directly related to the scholarship of discovery.
Integration makes connections between professions, seeking to interpret and generate
further insight and knowledge to research. Discovery and integration reveal the
investigative and synthesizing traditions of academia (Boyer, 1990; Glassick, Huber, & Maeroff, 1997).

**Scholarship of Application**

Theory and practice interact to contribute to the knowledge base. The mere application of knowledge defined through research that provides new intellectual understandings (Boyer, 1990; Glassick, Huber, & Maeroff, 1997). Service, tied to one’s discipline is demanding work that requires rigor and persistence of that associated with research.

**Scholarship of Teaching**

Scholarly teaching engages students and entices potential scholars (Boyer, 1990; Glassick, Huber, & Maeroff, 1997). The essence of scholarly teaching is professors that are conversant and intellectually engaged with students. Scholarly teaching is innovative that results in critical thinkers engaged in the pursuit of knowledge.

The continued advancement of the counseling profession relies on competent scholars to conduct and publish research, excel in teaching, and provide leadership to the profession. Doctoral students may play a significant role in the advancement of the counseling profession through scholarly activity and strengthening the professional identity of the profession. The development of a clear professional identity is critical to the advancement of the profession. Emerging counselor educators are continually examining and refining their professional identities as they develop into scholars.

Doctoral programs accept as a primary obligation extending the knowledge base of the counseling profession in a climate of scholarly inquiry (CACREP, 2001). Counselor educators have recognized the importance of committing to preparation
standards for doctoral student education. Additionally, CACREP accredited doctoral programs prepare students to generate new knowledge for the counseling profession through research that results in dissertations (CACREP). Engaging in scholarly activity early in doctoral training may be essential for students as aspiring faculty. Engaging in discussion to identify goals for scholarship while in doctoral programs is important as a means for early preparation for the professoriate (Warnke et al., 1999).

Data resulting from this study will provide doctoral students and counselor educators with a social comparison of the competition for tenure-track faculty positions based on the frequency of doctoral student scholarly activity. The more scholarly activity engaged in as a doctoral student, the more appealing and competitive the individual may be for an assistant professor position. In addition, engaging in scholarly activity at the doctoral level may provide preparation for dissertation research. Although doctoral students are characteristically provided varying degrees of scholarly experiences in doctoral programs, experiences are not always organized in ways that let them assume increasingly demanding responsibilities (Austin, 2002; Nyquist, Austin, Sprague, & Wulff, 2001) that closely resemble the demands of pre-tenured faculty.

Additionally, this study will have implications for curriculum development in doctoral programs. Increasing the scholarly activity of doctoral students may influence more intentional focus on scholarship in doctoral curriculum. This study provides results on the frequency of scholarly activity that suggests where counselor educators may need to focus their efforts on increasing scholarly activity of doctoral students in the curriculum and beyond. In addition, focusing on influencing the intrinsic motivation of students may strengthen doctoral student engagement in scholarship. Placing more
emphasis on scholarship and faculty development in the doctoral curriculum may be warranted.

The length of time a student is in a doctoral program may influence extent of engagement in scholarly activity as well as effect perceived importance of scholarship. Students in programs longer will have more potential to learn about research and be involved in research then novice doctoral students (Kahn & Scott, 1997). A case study in a family medicine department on scholarly activity examined scholarship over a 2 year period based on its use in the definition of successful faculty and a 5 year period based on faculty development and the influence of faculty workshops on publications as well as degree, rank and track to predict scholarship. Initial involvement in research may influence research self-efficacy (Betz, 1997). Therefore, result in an increased frequency of doctoral student scholarship regardless of length of time in doctoral program.

The frequency and perceived importance of scholarly activity of counselor education doctoral students may vary considerably. An explanation for this variation may be due to both the content of the goals, and the context in which the goals are pursued. Self-determination theory (SDT) focuses on the content of goals individuals have for achieving, and the social context within which goals are pursued (Deci & Ryan, 1985; 2000; Ryan & Deci, 2000; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Self-determination theory is built on the assumption that humans are intrinsically motivated to achieve. The theory suggests that intrinsic motivation requires satisfaction of the basic psychological needs from the social context in order to remain highly effective (Deci & Ryan, 2000). SDT postulates that when the needs of competence, autonomy, and relatedness are satisfied, it yields enhanced self-determination and well-being (Ryan &
Deci). The theory proposes that learning environments that support student autonomy will enhance intrinsic motivation, whereas environments that control students’ behavior, deleting their sense of decision and choice, will weaken intrinsically motivated behavior (Williams, Saizow, Ross, & Deci, 1997). The extent to which counselor education doctoral students engage in scholarly activity may be influenced by length of time in doctoral program, intrinsic versus extrinsic goal aspirations and the social context in which the goals for scholarly activity are pursued.

The quality of social contexts influences the performance of individuals who operate in them (Williams & Deci, 1996). The social context in which an individual is interacting influences the satisfaction of the three basic psychological needs required for self-motivation and enhanced well-being to achieve (Gagne & Deci, 2005). Autonomy, competence, and relatedness are essential for optimal human development (Ryan, Sheldon, Kasser, & Deci, 1996) and provide goals with their substance and influence which regulatory processes direct individual’s goal pursuits. Learning is an active process that functions optimally when students’ motivation is more autonomous than controlled for engaging in learning activities and assimilating new information (Ryan & Deci, 2000). Autonomy-enhancing contexts minimize external incentives and threats, avoid controlling language, and acknowledge the student’s frame of reference leading to increased autonomous motivation and facilitated learning, test performance, and adjustment (Ryan & Connell, 1989). Controlled contexts pressure students through the use of demands, incentives, and punishments resulting in diminished autonomous motivation (Deci et al., 1999).
Autonomous (facilitated learning) ↔ vs ↔ Controlled (pressures)

Figure 1: Social Contexts (Ryan & Deci, 2000).

Considerable SDT research has examined the qualities of the social contexts that undermine versus facilitate autonomous motivation. Deci, Koestner, and Ryan (1999) found that controlling social contexts pressure individuals through the use of incentives, deadlines, and punishments or through reliance on instructions that stress what individuals should do in order to accomplish a project, thus leading to diminished autonomous motivation and decreased persistence. Black and Deci (2000) found that autonomy-supportive contexts that minimize external incentives and threats, enhance autonomous motivation and facilitate learning, test performance, and adjustment. Studies have confirmed that intrinsic motivation is associated with better learning, performance, and well-being (Benware & Deci, 1984; Deci, et al.; Valas & Sovik, 1993).

Research Question

This study addresses the following research questions: To what extent does length of time in doctoral program, the pursuit of intrinsic versus extrinsic goal aspirations and the social context of doctoral programs influence the frequency of scholarly activity? To what extent does length of time in doctoral program, the pursuit of intrinsic versus extrinsic goal aspirations and the social context of doctoral programs influence the perceived importance of scholarly activity? The study will examine the relationship between length of time in doctoral program, the pursuit of intrinsic versus extrinsic goal aspirations and social context and the self-reported frequency and perceived importance of scholarly activity of counselor education doctoral students.
Research Hypothesis

This study addresses the following hypothesis: the frequency and perceived importance of counselor education doctoral student scholarly activity will increase as the level of intrinsic goal aspirations increase and autonomy-supportive social context increases. The research hypothesis is based on self-determination theory (SDT). The null hypothesis for the study states that there will be no relationship between the frequency of scholarly activity of counselor education doctoral students and length of time on doctoral program, intrinsic goal aspirations, extrinsic goal aspirations and social context. The second null hypothesis states that there will be no relationship between the perceived importance of scholarly activity of counselor education doctoral students and length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations, and social context of doctoral programs.

The hypothesis is supported by research that demonstrates the importance of faculty scholarly productivity (Ramsey et al., 2002) and provides evidence for the importance of scholarship in doctoral programs. In addition, success as an assistant professor is predicated upon success as a scholar. Therefore, setting high expectations for scholarly activity as a doctoral student may provide a realistic view of the expectations of scholarship required of pre-tenured faculty.

In addition, the hypothesis is supported by self-determination theory (SDT) which focuses on the content of goals individuals have for achieving, and the social context within which goals are pursued (Deci & Ryan, 1985; 2000; Ryan & Deci, 2000; Vansteenkiste et al., 2004). Self-determination theory is built on the assumption that humans are intrinsically motivated to achieve.
Self-determination theory (SDT) that focuses on both the content of the goals that individuals have for learning and the learning context within which the goals are pursued (Deci & Ryan, 1985; Ryan & Deci, 2000). The theory proposes that learning environments which support student autonomy or self-determination will enhance intrinsic motivation, whereas environments that control students’ behavior will weaken intrinsically motivated behavior (Williams et al., 1997). Intrinsic motivation is the ideal form of self-determination. The pursuit of intrinsic goal aspirations are engaged in out of interest with a full sense of choice, and without feeling coerced into the behavior. Intrinsic goal pursuits require satisfaction of the basic psychological needs for autonomy, competence, and relatedness (Deci & Ryan). Extrinsic pursuits are focused on external indicators of worth and controlled by specific external contingencies such as rewards or the avoidance of punishment. The types of extrinsic goals vary in the extent to which they are autonomous versus controlled. Students who are self-determined, or intrinsically motivated, are higher achievers and prefer optimal challenges (Reeve, 2002).

Significance

This study is significant to the counseling profession based on the theoretical and practical implications of the research. Theoretical implications of the research include gaining a further understanding of the goal aspirations and the factors within the social context that influence doctoral student scholarly activity. In addition, this study fills gaps in counselor education research and adds to the research base by examining the goal aspirations and social context that facilitates doctoral student scholarly activity.

There are practical implications from this study. Counselor education doctoral students will be informed of the frequency and perceived importance of the scholarly
activity of peers which may provide an accurate representation of the competition for tenure-track faculty positions. In addition, doctoral students who are active in scholarly activities may potentially be at an advantage based on the competition for tenure-track faculty positions (Follette & Klesges, 1988). Furthermore, this study will inform counselor educators and doctoral students of the goal aspirations and social context within doctoral programs that influence increased performance in scholarly activity. Findings of the study may generate more intrinsic and extrinsic motivation for scholarly activity resulting in doctoral students pursuing more challenges and opportunities for teaching, research, and service.

This study may suggest that counselor educators should focus attention on increasing scholarly activity of doctoral students, given the importance of scholarship to the advancement of the profession. Likewise, this research supports increasing doctoral student scholarly activity and increasing an understanding of the factors that influence doctoral student involvement in scholarly activity. This study may provide beneficial information for counselor educators to determine the social context relevant to the initiation and regulation of self-determined motivation essential to the pursuit of scholarship at the doctoral level. The social context is the condition within doctoral programs in which faculty may facilitate motivation, performance, and development through autonomy-support or control doctoral student behavior and scholarly goal pursuits (Deci & Ryan, 1987). This study has the potential to inform counselor educators of factors that influence doctoral student engagement in scholarly activity including frequency and perceived importance of scholarship, effects of intrinsic versus extrinsic
goal aspirations on scholarly achievement and the influence of the social context in which involvement in scholarly activity is pursued.

Additionally, studying this topic can provide counselor education doctoral programs with a comparison of scholarship across doctoral programs and may potentially inform curriculum development. Curriculum may evolve with more intention regarding scholarship. This may develop through integrating discussions of scholarship and requirements for projects of scholarly activity that will have specific outcomes including conference proposal submissions, manuscripts for publication, and innovative teaching. In addition, students may begin to collaborate on scholarly activity with peers and faculty. Experiences within curriculum may facilitate motivation and increase the extent and importance of scholarship at the doctoral level. This study may advance the counseling profession through promoting higher standards of scholarship among doctoral preparation programs. Finally, the results regarding the frequency and perceived importance of scholarly activity supports the development of specific criteria in the CACREP standards for doctoral scholarship. The findings may result in the development of specific criteria in the CACREP standards. In addition to the preparation standards, CACREP may consider developing requirements for scholarship during doctoral study. Based on literature and intention of counselor education doctoral programs to produce scholars for the profession, CACREP may utilize results of this study to consider generating specific criteria for scholarly activity beyond the preparations standards.

Additionally, this study adds to research on scholarship in the counseling profession by examining the frequency and perceived importance of doctoral student
scholarly activity (teaching, research, and service), length of time in doctoral program, intrinsic versus extrinsic goal aspirations, and the social context of doctoral programs.

Limitations and Delimitations of the Study

The delimitation for this study is that counselor education doctoral students in CACREP accredited programs may be more engaged in scholarly activity due to the doctoral preparation standards regarding scholarship for those accredited programs rather than non-CACREP accredited programs.

The limitations in this study include the fact that only doctoral student samples were generated and objective self-report measures of frequency and perceived importance of scholarly activity and goal aspirations were obtained. In the study, doctoral students were surveyed in isolation from faculty scholarly productivity which provides an analysis of the faculty scholarly context of doctoral programs. Additionally, obtaining random sample lists of doctoral students from the American Counseling Association (ACA) and the Association for Counselor Education and Supervision (ACES) excludes doctoral students who are not ACA or ACES members that are not participants in the study. Doctoral students not included in the sample may be less motivated to develop as scholars as evidenced by lack of professional involvement in ACA, ACES and thus results in a limitation of this study.

Conceptual Definitions of the Variables

The definitions for the variables in this study are defined as follows:

1. Doctoral Student – an individual pursuing a doctoral degree in counselor education and supervision that is gaining advanced preparation to work as a counselor educator,
supervisor, and advanced practitioner in academic and clinical settings (CACREP, 2001).

2. Scholarship - The four forms of scholarship: (a) discovery, (b) integration, (c) application, (d) teaching are distinct yet inseparable (Boyer, 1990).


4. Teaching Scholarly Activities - defined as courses taught and developed.

5. Research Scholarly Activities - defined as journal articles, national, regional and state conference proposals and presentations, and other written works.

6. Service Scholarly Activities - defined as professional leadership roles, student representatives, and association committee members.

4. Frequency of Scholarly Activity – Extent of involvement in scholarly activities including teaching, research, and service during a doctoral program.

5. Perceived Importance of Scholarly Activity – Importance of scholarly activities to excelling as a doctoral student.

6. Length of Time in Doctoral Program – Amount of time in doctoral studies expressed in semesters or quarters.

7. Intrinsic Goal Aspirations – Goals individuals strive for including personal growth, meaningful relationships, and community contribution, which are closely associated with basic needs satisfaction (Deci & Ryan, 2000).

8. Extrinsic Goal Aspirations – Goals individuals strive for including wealth, fame, and image, which are more related to obtaining contingent approval or external signs of worth
and thus are, on average, expected to decrease motivation and has the potential to distract from basic need satisfaction (Deci & Ryan, 2000).

9. Social Context – General ambience of the environment can tend either to support autonomy or to control behavior (Deci & Ryan, 1987).

10. Autonomy-Supportive Social Context – context that facilitates self-determined motivation, healthy development, and optimal functioning resulting in satisfaction of basic psychological needs through the individual in an authority role assumes another’s perspective, acknowledging feelings and perceptions, providing information and choice while minimizing the use of pressure and control (Williams & Deci, 1996).

11. Controlling Social Context – context of excessive control, non-optimal challenges, and lack of connectedness disrupt the inherent actualizing tendencies and result in diminished self-determined behavior and the deprivation of supports for satisfaction of basic psychological needs (Ryan & Deci, 2000).

Summary

This chapter provided an introduction to scholarship, motivation and social contexts. The research question and null hypothesis were presented. The significance of pursuing the research study was addressed in relation to doctoral student scholarship and the advancement of the counseling profession. The delimitation and limitations of the study were provided. In addition, the variables were operationally defined. The literature review in chapter 2 will emphasize the importance of examining the relationship between the frequency and perceived importance of doctoral student scholarly activity and length of time in doctoral program, intrinsic versus extrinsic goal aspirations and social context of doctoral programs.
CHAPTER II: LITERATURE REVIEW

The literature review presents an introduction and critical review of the relevant literature. This chapter is divided into three sections. First, general and counselor education scholarship research are discussed. Second, the principles of self-determination theory are discussed focusing specifically on intrinsic versus extrinsic goal aspirations and motivation. The literature review emphasizes research that demonstrates the impact of intrinsic and extrinsic goal aspirations on scholarly activity at the doctoral level. Finally, social context is explored as a predictor of doctoral level scholarship.

Critical Review of the Relevant Literature

The traditional or dominant view of scholarship is defined as research and publication for the advancement of knowledge (Glassick, Huber, & Maeroff, 1997). A more current view of scholarship in academia is a multidimensional definition of academic tenure defined as discovery, integration, application, and teaching (Boyer, 1990). Scholarly activity is defined as a broad range of scholarly accomplishments and activities (Gelso, Betz, Friedlander, Helms, Hill, Patton, Super, & Wampold, 1988). Specifically defined, discovery and integration are the investigative and synthesizing traditions of academia (Boyer). Within these forms of scholarship contain scholarly works including journal articles, conference presentations, and other published works, with the exception of teaching as a component of the scholarship of integration. Further, application is service encompassing pieces of discovery and integration as well as other written works, professional activities, and professional leadership roles. Finally, teaching, the scholarly process of intellectual dialogue, entices emerging scholars and influences research and practice (Glassick, Huber, & Maeroff, 1997). Instructing undergraduate and graduate
students, designing and implementing courses, and co-teaching with faculty may be regarded as scholarly activity of teaching (Ramsey et al., 2002). Additionally, scholarship is research, linking theory and practice and being effective with students (Glassick et al., 1997). Generating and publishing research significant to the profession, extending knowledge to students, and being a leader in service broadly defines scholarly activity for counselor educators. For medical education faculty, scholarly activity was defined as scholarly projects in three areas including publication of research papers in peer reviewed or non peer reviewed sources; presentations reporting research, educational methods, or clinical topics made at regional, national, international conferences; and obtaining funded grants (Ferrer & Katerndahl, 2002). Generally, the broad definition of scholarship is universal across disciplines yet becomes specific within a profession as a means for promotion and tenure and to delineate one profession from another. An examination of the scholarly activity of counselor education doctoral students may support the development of specific criteria in the CACREP standards for doctoral scholarship, provide support for setting higher expectations of the scholarly activity of doctoral students, inform curriculum development and have implications for the advancement of the counseling profession.

The major strength of the research in this review is the amount of literature on scholarship in academia (Boyer, 1990; Glassick et al., 1997), goals of doctoral programs (Zimpfer, Cox, West, Bubenzer, & Brooks, 1997), and the emphasis on scholarship for academic tenure (Ramsey et al., 2002; Sorcinelli, 1992). The criteria for tenure traditionally cited are the scholarly activities of research, teaching, and service (McGaffrey, Nelles, & Byrne, 1989). Conversely, the deficiencies in the literature are
that there has been minimal research on doctoral student scholarly activity. In addition, there has been no research conducted on the support and development of scholarship at the doctoral level and determining whether intrinsic versus extrinsic goal pursuits are associated with increased scholarly activity. Although, there is an excess of research on intrinsic versus extrinsic goal pursuits associated with high achievement.

**Scholarship**

Faculty are obligated to provide high quality instruction, conduct research, write for publication, offer leadership in professional organizations, and provide service to the university and the community (Osborne & Purkey, 1995). The term scholarship, as defined by Boyer (1990), contains a broad meaning that includes the entire scope of academic rigor including the scholarship of discovery, integration, application, and teaching. One of the most critical issues in academia, a major component of academic life, relates to the exact meaning of scholarship (Boyer). According to the dominant view, to be a scholar is to be a researcher in which publication is the means used to measure scholarly productivity (Boyer). Scholarship is central to academic life and new faculty spend their time teaching, involved in research leading to publication, working to obtain research grants, and engaged in leadership (National Center for Educational Statistics, 1989). In academia, success as an assistant professor is predicated upon success as a scholar (Smaby, 1999).

Doctoral students are engaged in scholarship to an extent that provides an idea of the scholarly work required as faculty. Doctoral students fall on a continuum of experience in scholarship at the doctoral level that provides variations in preparation for the scholarly demands of academia and that transforms them from doctoral students to
academic scholars. The standard measure of scholarship tends to be research and publication for achieving tenure and for obtaining a faculty position although preparation programs support the various forms of scholarship.

A study conducted on faculty development explored the predictors of short-term and long-term scholarly activity of academic faculty in a university family medicine department. Productivity, defined as publications, external presentations, and funded grants, declined since the time of medical school graduation. Faculty with the Doctorate of Philosophy (Ph.D.) degrees were most productive, closely followed by the dual-degree, Ph.D. and Medical Degree (M.D.) faculty (Ferrer & Katerndahl, 2002). Assistant professors obtained more grants and gave more non-research presentations while associate professors published the most papers and gave more research presentations. Tenure-track faculty were more productive for most outcome measures than non tenure-track faculty (Ferrer & Katerndahl). Baseline scholarship should be established to promote increased scholarly activity (Ferrer & Katerndahl). In conclusion, it was determined that research training through advanced degrees or fellowships enhances scholarly activity (Ferrer & Katerndahl). The study found that in addition to professional characteristics, the environmental characteristics that promote scholarly productivity are essential.

A study by Ramsey et al. (2002) found that counselor educators pursued traditional scholarly activity, perceived to be more important for promotion and tenure than other forms of scholarship. The findings also suggest that counselor educators remain committed to the various forms of scholarship to serve the needs of the academy, the profession, and society.
In accordance with doctoral program goals, the doctorate of philosophy degree (Ph.D.) has been considered preparation for teaching and research roles in academia (Boes, Ullery, Millner, & Cobia, 1999). The Council for Accreditation of Counseling and Related Educational Programs (CACREP) is an independent council formed by ACA to develop, implement, and maintain standards of preparations for degree programs in counselor education (Clawson, Henderson, Schweiger, & Collins, 2004). Additionally, CACREP doctoral preparation standards outline the minimum guidelines for accredited doctoral counselor education programs. The CACREP standards are assumed to be the universal and broadly defined goals of counselor preparation that focus on preparing scholars for the advancement of the counseling profession (Schmidt, 1999; Vace & Charkow, 1999).

The establishment of CACREP has had a positive impact on the counseling profession in the areas of doctoral preparation, professional identity, and scholarship. The 2001 CACREP doctoral standards provide doctoral programs with goals for minimum preparation of doctoral students as a base for preparation. The expectations set by accredited doctoral programs beyond the minimum standards for scholarship and general academic preparation is determined by expectations of individual programs. Emphasis on scholarship and higher expectations for scholarly activity of doctoral students in counselor education programs may provide students with the scholarly experiences that will transform them from doctoral student to academic scholar. A clear identification of the areas of scholarship in the CACREP doctoral preparation standards may increase scholarly activity and advance the profession. Scholarship at the doctoral level may indicate higher expectations for research and publication. Faculty search committees seek
potential new assistant professors with increased research and teaching experience (Boes et al., 1999) relevant to the profession.

Zimpfer et al. (1997) conducted a descriptive study to determine the focus of doctoral preparation in counselor education, including program goals and implementation of goals in the curriculum. CACREP programs versus non CACREP programs indicated an equal emphasis on the roles of teaching, research, leadership, supervision, and clinical practice. Based on this data, CACREP programs endorse a pluralistic view of doctoral preparation including practitioner, scholar, teacher, supervisor, and leader (Zimpfer et al.).

A study of doctoral graduates revealed that few were active in leadership positions beyond membership in professional counseling associations (Zimpfer, 1996). Findings from this study suggested that preparing leaders is significant to the profession and faculty must determine a means to promote doctoral students’ acceptance of leadership as an aspect of their preparation as counselor educators (Zimpfer et al., 1997). Leadership includes integrating theory and practice and means engagement as a scholar (Boyer, 1990; Glassick, Huber, & Maeroff, 1997). Being more intentional about leadership in curriculum development may increase the level of scholarly activity among doctoral students (Zimpfer). Engaging doctoral students in leadership opportunities at the university and professional association level provides students with scholarly experiences related to leadership. In addition, CACREP revisions may include more emphasis in the doctoral preparation standards for scholarship as a means of highlighting the critical nature of scholarship to the advancement of the counseling profession.
A clear conception of criteria used to assess the accountability of counselor preparation programs is critical to establishing professional counseling identity and to confirm the counseling profession’s goals (Vacc & Charkow, 1999). The 2001 CACREP doctoral preparation standards are outcomes used as evaluation criteria to determine if doctoral programs are effective and meeting intended goals. Within the doctoral preparation standards, criteria for scholarship are not as clearly defined, therefore permitting programs to define their own level of expectations for doctoral student scholarship. This level may not exceed the minimum requirements outlined in the standards, which has the potential to result in lower levels of doctoral student scholarly activity, resulting in decreased understanding of scholarly productivity in academia.

Finally, a five year study of new faculty expectations suggests that graduate programs provide significant insight and information into the faculty role at a conceptual level and create a set of general expectations similar to the goals and norms encountered in a faculty position at a research university. Doctoral students must be equipped with more disciplinary expertise and a general sense of mission (Olsen & Crawford, 1998). Determining the extent to which doctoral students are being prepared for the professoriate may depend on the program goals of doctoral preparation.

*Doctoral Student Scholarship and Development*

The development of scholars is a key component to counselor education doctoral preparation. Engaging in scholarship early in doctoral training provides experience and preparation for the professoriate (Warnke et al., 1999). In contrast, Boice (1995) suggests that new assistant professors are typically underprepared and the majority find or devote minimal time to scholarship. Magnuson et al. (2003) found that assistant professors of
counselor education who successfully engaged in scholarship related their success to their doctoral preparation programs. In addition, programs that integrate how to successfully submit manuscripts for publication in counseling journals are addressing a key component of scholarship and development (Magnuson). Devising strategies for balancing scholarly experience in research, teaching, and service while completing the academic requirements of a doctoral program may provide a more feasible means for increasing the scholarly activity of doctoral students. The potential for scholarly experiences in doctoral programs are abundant and have the potential to prepare emerging scholars for the scholarly rigor of promotion and tenure. Considering doctoral student scholarly development provides a framework for assessment and evaluation of scholarly progress during doctorate education.

An increase in doctoral student scholarly activity begins with an understanding of factors that influence involvement in scholarship at the doctoral level. Influencing research productivity early in a doctoral program can influence self-efficacy and increase involvement in scholarly activity (Betz, 1986). Research on doctoral student development has identified dimensions of scholarly development (Austin, 2002; Nyquist, Auston, Sprague, & Wulff, 2001). Discussion of concerns regarding measuring doctoral competencies, knowledge, understanding, and depth of graduate experience as well as determining if doctoral programs are adequately preparing emerging academic faculty lead to studies that examined improving and reforming doctoral education. Studies of doctoral student development (Austin; Nyquist et al., 1999) identified specific dimensions of scholarly development for assessment and evaluation. The dimensions of doctoral scholarship include development as researchers, teachers, engaged scholars of
service, and institutional/organizational citizens (Austin). In relation, research to define scholarship in a broader, more efficacious sense resulted in the four forms of scholarship known as discovery, integration, application, and teaching in the realm of academia (Boyer, 1990; Glassick, Huber, & Maeroff, 1997).

Research

Doctoral students are required to develop as researchers based upon the expectations of doctoral study, regardless of intention beyond the doctoral degree. The development of a research base is important in defining a discipline (Ferrer & Katerndahl, 2002). The doctoral degree implies that an individual has gained a specific level of knowledge and skill as a researcher (Austin, 2002) and the ability to contribute to the literature in their specific discipline or profession. A researcher must have strong grounding in the profession, an understanding of the history and questions that guide the profession, and knowledge of the various ways of knowing and knowledge of the methodological procedures used in the profession (Austin). The scope of scholarship includes research, teaching, and service. Glassick et al. (1997) view the scholarship of research as two dimensions of the four forms of scholarship. The scholarship of discovery is the first and most familiar element in the model of scholarship that contributes to the collection of human knowledge and to the intellectual climate of academia (Glassick et al.). The scholarship of integration seeks connections within and between disciplines and reflects the investigative and synthesizing traditions of academic life (Glassick et al.). The pursuit of scholarly investigation must be cultivated and defended (Boyer).

Specifically, publishing journal articles, presenting at national, regional, and state conferences, publishing other works, and teaching are regarded as scholarly activities of
discovery and integration (Ramsey et al., 2002). Research and publication are essential to the development of a knowledge base and strength of a profession.

Requirements for promotion and tenure present new assistant professors with expectations to engage in scholarship of research and publication. The “publish or perish” rule posed a prominent challenge for new assistant faculty (Magnuson, 2002) in addition to the other areas of scholarship that are expected. Increased expectations of scholarship of doctoral students may provide opportunity and practice for academic positions and has the potential to decrease the challenges associated with adjustment and expectations for promotion and tenure in academia. The ability of new faculty to navigate the early years, in which rewards and pressures are great, is critical to their success in academia (Sorcinelli, 1994).

Teaching

Another area of doctoral student scholarly development is teaching. A component of counselor education doctoral preparation is training scholars in the area of teaching. The scholarship of teaching, a form of scholarship, is a process of intellectual exchange of knowledge that enables students to comprehend and is that which influences research and practice (Glassick et al., 1997). According to Boyer (1990) scholarly teaching is having strong knowledge and intellectual engagement with students. The expectations of doctoral students in the area of teaching may include instructing undergraduate and graduate students, designing and implementing courses, and co-teaching with faculty (Ramsey et al., 2002). These teaching experiences may prepare emerging faculty as scholars of teaching for the profession. There are many aspects of teaching that doctoral students must master including gaining knowledge about the cognitive learning process
of students, learning various teaching strategies, and the appropriateness of strategies to
the profession and its challenges and questions.

Magnuson, Norem, and Haberstroh (2001) found that doctoral students interested
in counselor education faculty positions, would benefit from participation in a variety of
teaching opportunities including teaching assistantships and adjunct positions rich in
experience and preparation. In addition, novice teachers must learn of the individual
differences in students and the shift from an emphasis on teaching strategies to learning
outcomes (Austin, 2002). Experience in developing skills in ethics such as faculty-
student relationships and issues related to power as well as skills in evaluation,
technology, and advising students is critical to doctoral student development as a teacher.
Emerging counselor educators are preparing students to become professionals and to
identify with the counseling profession while being involved in the profession. In this
capacity, counselor educators have a responsibility in the classroom to model
professionalism and challenge students to aspire to standards of excellence in their
profession (Magnuson & Norem, 2002).

Service

Essential to doctoral student development is experience as an engaged scholar in
the counseling profession. Minimal attention is directed to service as a critical form of
scholarship potentially between the conflict of values in academia and needs of the
outside world (Boyer, 1990). The scholarship of application, tied directly to and related
specifically to a profession, is essentially when theory and practice interact (Glassick,
Huber, & Maeroff, 1997) beyond research and teaching including departmental or college
committees and leadership in professional organizations at the local, state, and national
level. This requires demanding work of scholars that necessitates rigor similar to that associated with research (Boyer). Scholarly activity in application or service includes publishing journal articles, presenting at national, regional, and state conferences, other published works, other written works, professional activities, and professional leadership roles (Ramsey et al., 2002). Leadership is crucial to the identity and advancement of the counseling profession. An understanding of service is gained through a sense of the interrelationship of theory and practice. In addition, doctoral students must expand their skills in communicating with experts from other fields and being effective in service inside and outside the academic context (Austin, 2002).

Finally, the area of institutional citizen applies to doctoral students regardless if they assume faculty positions or roles outside academia. Doctoral students must learn to be effective institutional citizens in academia through acquiring awareness of the historical and current issues in academia pertaining to institutional citizenship and academic decision making (Austin, 2002). Regardless of specific career goals post doctoral degree, student ability and skill in this area include time management, meeting management, conflict resolution, and strategic planning. Specific to counselor education, a study conducted by Magnuson (2002) regarding the experiences of new assistant professors of counselor education in their first year, reported time management as critical to reducing stress that may be mastered as a doctoral student. As expectations for scholarship are increased at the doctoral level, students may develop into experts in time management as well as areas of scholarship.

Length of Time in Doctoral Program
Doctoral students who have been in a doctoral program longer may have more opportunities to conduct research resulting in cumulative research productivity during doctoral studies. A study on a sample of counseling psychology graduate students found support for this hypothesis, advanced graduate students had produced more research than had beginning students (Phillips & Russell, 1994). Kahn (2001) found that productivity was directly predicted by research self-efficacy, research interest, and the student’s year in doctoral program, although these predictors accounted for a small amount of variance in the prediction model. Early involvement in research can influence research self-efficacy and promote engagement in scholarship (Betz, 1986). This is consistent with Bandura’s theory (1982) that direct experience is one of the primary ways to increase one’s self-efficacy. Generalizing from this theory, in this case, length of time in doctoral program would increase the extent of scholarship that would increase confidence in scholarly ability. The length of time a student has been in a doctoral program may influence their extent of scholarly productivity if the factors that enhance intrinsic motivation and positive attitudes toward scholarship are present within the social context of the program.

Advancement of the Counseling Profession

Scholarship is important to the advancement of professions. The development of a research base is important in defining a discipline (Ferrer & Katerndahl, 2002). Doctoral students in counselor education programs have the opportunity to contribute the literature through collaborating with faculty and peers on research teams. Additionally, dissertation research of doctoral students may be transformed into manuscripts for publication. In
addition, doctoral students may develop a doctoral student journal dedicated to doctoral student research that promotes engagement in scholarship and informs the profession.

Research dedicated to discovering and integrating knowledge has the potential to contribute to establishing and strengthening the counseling profession. The areas of scholarship are important to advancing the profession, although the development of a strong research base is essential to defining a profession (Ferrer & Katerndahl, 2002). The 2001 CACREP standards posit criteria including potential for scholarship and demonstrated research competencies expected of doctoral graduates (CACREP). Although research is critical to advancement, it will not secure the future of academia and professions. In addition, new generations of college students need scholarly teachers and academia needs scholars who can integrate knowledge and apply it beyond the college classroom (Glassick et al., 1997). Therefore, increasing research expectations of counselor education doctoral students in doctoral programs may be warranted for several reasons. In addition, determining predictors of scholarly activity of doctoral students, including motivation, may have implications for increasing student scholarly activity in doctoral programs and for future research.

Advancing the profession of counseling and strengthening professional identity stems from a focus on scholarship and research activity. Counselor education preparation programs accredited by CACREP ascribe to a scholarship model to prepare students as scholars of teaching, research, and service. As the field expands based on research published, the identity of counseling will evolve. Increasing the involvement of counselor education doctoral students in scholarly activity will increase the research base and advance the profession. Understanding the factors that influence doctoral student
involvement in scholarly activity, intrinsic motivation, and the social conditions that facilitate performance, development, and self-determination is a viable goal.

Self Determination Theory

Self-determination theory (SDT) is built on the assumption that humans are intrinsically motivated to achieve (Deci & Ryan, 1985) and relates to humanistic theory. The core of humanistic theories is the full realization of the self. The approach is not deterministic, thus what matters is how an individual views self and others. Humans are considered to be energized by an actualizing tendency and believe that well-being occurs to the extent individuals can express their inherent potentials (Kasser & Ryan, 1996). In circumstances of unconditional positive regard (Rogers, 1963) or forceful external demands (Maslow, 1956), individuals often forego their own actualization to attain regard or outcomes from others (Kasser & Ryan, 1993). Additionally, Fromm (1976) discussed a consummatory and experiential orientation to life. He considered the former as reflecting distancing from the actualizing tendencies of the self. The humanistic theories suggest that extrinsic goal aspirations may distract from self-actualization and be associated with decreased well-being (Kasser & Ryan, 1993).

In relation, self-determination theory (SDT) focuses on the content of goals and the social context within which goals are pursued (Deci & Ryan, 1985; 2000; Ryan & Deci, 2000; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). According to self-determination theory, inherent in human beings is an intrinsic motivation to achieve. The theory suggests that intrinsic motivation requires satisfaction of basic psychological needs from the social context in order to remain highly effective (Deci & Ryan, 2000). The social contexts that consider students’ frame of reference, avoid strict instructions,
and external contingencies have been found to provide satisfaction of basic psychological needs and result in enhanced autonomous motivation and facilitate learning, academic performance, and adjustment (Black & Deci, 2000; Ryan & Connell, 1989). Learning is an active process that functions optimally when students’ motivation is autonomous versus controlled (Ryan & Deci, 2000a).

Research in the area of self-determination theory consists of distinguishing between various forms of motivation. Self-determination theory posits a self-determination continuum to distinguish between forms of motivation. The continuum ranges from amotivation, which is entirely lacking in self-determination, to intrinsic motivation, which is completely self-determined (Deci & Ryan, 1985). The four types of extrinsic motivation are between amotivation and intrinsic motivation on the continuum, with external being the most controlled and therefore the least self-determined type of extrinsic motivation, and introjected, identified and integrated being progressively more self-determined (Gagne & Deci, 2005).

<table>
<thead>
<tr>
<th>Amotivation</th>
<th>Extrinsic Motivation</th>
<th>Intrinsic Motivation</th>
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<td>External</td>
<td>Introjected</td>
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Figure 2: Motivation Continuum (Gagné & Deci, 2005).

Self-determination theory describes the types of regulation to determine the extent that individuals have integrated the regulation of a behavior or set of behaviors (Deci, Vallerand, Pelletier, & Ryan, 1991). The theory proposes that under optimal conditions,
individuals have the ability to fully integrate a new regulation or integrate an existing regulation that had been partially internalized (Deci & Ryan). Intrinsic and extrinsic motivation is reflected in different reasons for behaving, and these reasons provide a means for assessing the types of motivation (Ryan & Connell, 1989).

The social context influences the satisfaction of the three basic psychological needs required for self-motivation and enhanced well-being to achieve (Gagne & Deci, 2005). The three basic psychological needs, autonomy, competence, and relatedness are essential for optimal human development and integrity, provide goals with their substance, and influence which regulatory processes direct individual’s goal pursuits (Ryan, Sheldon, Kasser, & Deci, 1996). Deci and Ryan’s (2000) research focuses primarily on an examination of the degree to which individuals experience basic psychological need satisfaction in varying social contexts and of the consequences of various degrees of satisfaction (Deci & Ryan). Although there may be individual variations in the strength of individual’s needs for autonomy, competence, and relatedness, the focus lies in how the need has been affected by the interaction of the need and the context in which it is or is not supported (Deci & Ryan).

Autonomy refers to being self-initiating, self-directed, and self-regulating of one’s own actions (Carver & Scheier, 1999; Deci et al., 1991); competence involves understanding how to attain various external and internal outcomes and being effective in performing the necessary actions; and relatedness involves developing secure and satisfying connections with others in one's social context. The human needs specify the necessary conditions for psychological health and their satisfaction is hypothesized to be associated with the most effective functioning (Deci & Ryan, 2000). Opportunities to
satisfy any of these needs contribute to individuals being motivated. The three innate psychological needs are exhaustive and explain a substantial amount of variance in human behavior and experience (Connell, 1990; Deci & Ryan, 1985). An explanation of these human needs related to intrinsically motivated processes guides researchers to predict the conditions that will promote rather than undermine intrinsic motivation. A direct consequence of the self-determination perspective is that individuals will pursue goals that support their need satisfactions (Deci & Ryan). A clear understanding of the conditions that support intrinsically motivated doctoral students to pursue scholarly activity in doctoral programs may be critical to increasing scholarly productivity at this level.

**Intrinsic and Extrinsic Goal Aspirations**

The concept of the basic psychological needs for competence, autonomy, and relatedness serves to define the contextual factors that tend to support versus undermine motivation, performance, and well-being (Ryan & Deci, 2002). The relation of goal contents to well-being has been studied concerning life goals. It is crucial to study the concepts of intrinsic and extrinsic goals to examine the relative importance that individuals place on the two types of goals (Sheldon, Ryan, Deci, & Kasser, 2004).

The processes through which goal directed behavior is regulated, through intrinsic versus extrinsic forms of motivation affects outcomes of behavior (Deci & Ryan, 2001). Essential to understanding motivation is examining the content of goal pursuits to perseverance and achievement. Studies by Kasser and Ryan (1993, 1996) differentiated between intrinsic aspirations (i.e., affiliation, personal growth, and community contribution) closely associated with basic need satisfaction. Intrinsic goals are
expressive of desires congruent with actualizing and growth tendencies natural to humans. Intrinsic goal aspirations are likely to satisfy basic and inherent psychological needs. Extrinsic goal aspirations (e.g., attaining wealth, fame, and image) which are more related to gaining contingent approval or avoiding criticism are less likely to result in need satisfaction and may even distract from it (Deci & Ryan, 2001). Extrinsic goals do not provide satisfaction, yet their appeal lies in the presumed admiration or in the power and sense of worth that can be derived from attaining them (Kasser & Ryan, 1996).

Carver and Baird (1998) challenged Kasser and Ryan’s (1993, 1996) conclusions suggesting that it may be the motives behind the aspirations rather than the actual aspiration. Thus, the “why” behind the aspiration rather than the goal itself is critical to explaining a connection to basic needs satisfaction. The focus of the study was to determine if it was the actual motive to obtain wealth, satisfied basic needs satisfaction. In the study, undergraduates reported the relative importance placed on goals of wealth, an extrinsic goal aspiration, and community involvement, an intrinsic goal aspiration, to assess the motives behind these goals. The empirical study provides partial support for their argument that reasons for having a goal were more important than the goal itself. Despite the argument that the content effect is largely reducible to the motive effect, results suggest that virtually none of the negative effect of the wealth goal was explained by motive (Sheldon, Ryan, Deci, & Kasser, 2004).

Another critic of the possibility that pursuing extrinsic goal aspirations, particularly wealth, may decrease basic needs satisfaction, Srivastava, Locke, and Bartol (2001) conducted a study similar to the Carver & Baird (1998) study to determine if wealth, an extrinsic aspiration, is associated with decreased need satisfaction. The results
suggest that the negative association between wealth and satisfaction of basic psychological needs became insignificant related to negative motives including focusing on money to overcome self-doubt, to gain power, and to engage in social comparison. In addition, positive motives pertaining to wealth were neutral with respect to effects on satisfaction of basic needs. Finally, the study found that wealth may not be a direct cause of decreased needs satisfaction and that the negative relation between wealth importance and needs satisfaction was due to the result of motives (Srivastava et al.).

Studies conducted on intrinsic and extrinsic goal pursuits have suggested that links to basic needs satisfaction and the pursuit and attainment of intrinsic aspirations would be more strongly associated with well being than would the pursuit and attainment of extrinsic aspirations. Research conducted by Kasser and Ryan (1993; 1996) and Sheldon and Kasser (1998) regarding the importance and attainment of various aspirations or life goals found that highly effective individuals may experience less optimal well being if they pursue and successfully attain goals with more extrinsic than intrinsic contents. Intrinsic goals provide relatively direct need satisfaction. SDT postulates that satisfaction of basic psychological needs provides the nutriments for intrinsic motivation and internalization. Intrinsically motivated individuals are autonomously motivated to achieve.

*Intrinsic Motivation*

Intrinsically motivated behaviors are engaged in for interest and the satisfaction derived from their performance. In addition, intrinsically motivated behaviors are the prototype of autonomy. Autonomy is a basic psychological need that when satisfied promotes and maintains intrinsically motivated behaviors (Vallerand & Ratelle, 2002).
Deci (1975) proposed that intrinsically motivated behaviors are based in needs to feel competent and self-determined. Intrinsic motivation is the inherent tendency to seek out novelty and challenge, to extend one’s capacities, and to explore (Deci & Ryan, 2000). Individuals are intrinsically motivated for activities that hold intrinsic interest for them, activities that have the appeal of innovation and challenge. Despite the fact that humans are endowed with intrinsic motivational tendencies, research suggests that to maintain and enhance intrinsic motivation requires supportive conditions (Deci & Ryan). Intrinsic motivation can be disrupted and substantially decreased by nonsupportive conditions. Similarly, a study conducted by Tafaroni, Milne, and Smith (1999) concluded that enhanced intrinsic motivation amplified confidence in performance. In addition, providing choice to individuals increased intrinsic motivation (Zuckerman, Porac, Lathin, Smith, & Deci, 1978). Research suggests that providing choice, feedback, and rewards not only improve upon intrinsic motivation but also have effects on cognitive flexibility, conceptual learning, and complex problem solving (Deci & Ryan, 2000). In contrast, threats, observation, evaluation, and deadlines have the potential to undermine intrinsic motivation (Ryan & Deci, 2000). Research suggests that providing choice, support, and acknowledging an individual’s inner experience prompts intrinsic motivation, competence in performance, and enhanced satisfaction of the basic psychological needs. Opportunities for self-direction enhance intrinsic motivation and the result is increased autonomy (Deci & Ryan, 1985). Feedback is an essential component of intrinsic motivation. Deci and Ryan (1980) linked results of previous studies on the impact of feedback to the need for competence. Individuals must feel liable for the competent behavior to have positive effects on intrinsic motivation.
Although Deci and Ryan (2000) found autonomy and competence to be the most influential components of intrinsic motivation, research suggests that relatedness plays a distal role in the maintenance of intrinsic motivation. Self-determination theory posits that intrinsic motivation will be enhanced in contexts that provide a sense of relatedness (Ryan & LaGuardia, 2000). Deci and Ryan (2000) report there are situations in which relatedness is not as critical to intrinsic motivation as autonomy and competence. There are times when individuals engage in intrinsically motivated behaviors in isolation, although a secure relational base provides support for intrinsic motivation.

**Extrinsic Motivation**

Extrinsically motivated behaviors are performed not out of interest, but based on the belief that they are instrumental to some separate consequence (Deci et al., 1991). Behaviors that are coerced or seduced by external forces were said to represent external causality and define extrinsic motivation (Deci & Ryan, 1990). Extrinsic motivation involves engaging in an activity for external reasons, to gain rewards or avoid criticism (Baker, 2004) rather than for internal satisfaction. Researchers have focused on examining how individuals acquire the motivation to persevere and accomplish non-intrinsically motivated practices and how this type of motivation affects ongoing persistence and well being (Ryan & Deci, 2000).

Recent research suggests that there are varying forms of extrinsic motivation that differ based on the extent to which they are self-determined versus controlled (Ryan & Connell, 1989). Extrinsically motivated behavior rests on a continuum of self-determination, resulting in either a relatively internal or an external perceived locus of causality (Deci & Ryan).
Externally motivated behaviors are considered controlled by specific external contingencies in which the individual performs to attain a desired consequence (Deci & Ryan, 2000). External regulations can be transformed into internal regulations through the process of internalization (Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000). The four forms of extrinsic motivation are a result of internalization being differentially effective.

One of the forms is internalization, a method of assimilating and internalizing external regulations and integrating them into their sense of self. However, when the process of internalization is prevented, regulations may remain external or be only partially internalized. The degree of internalization results in a form of extrinsic motivation (Deci & Ryan, 2000). External regulation is the least self-determined and therefore the most externally controlled form of extrinsic motivation and is performed for external reward or the avoidance of punishment administered by others. Introjection involves behaviors motivated by coercion. Introjection is considered partial internalization in which external regulations are taken in but not accepted as his or her own. The contingent consequences of introjection are administered by individuals to themselves. In contrast, identification is a form of extrinsic motivation in which initially controlled behaviors become more autonomous. Finally, integration is the most advanced form of extrinsic motivation and has similar qualities with intrinsic motivation (Deci & Ryan, 1991). Although autonomous, integration is considered extrinsic because the motivation is characterized by an activity being instrumentally important for personal goals rather than out of interest. Identified extrinsic motivation is relatively autonomous yet differs from intrinsic motivation.
SDT posits a self-determination continuum ranging from amotivation to intrinsic motivation. Between amotivation and intrinsic motivation are the four forms of external motivation including external, closest to amotivation, and introjected, identified, and integrated being progressively more self-determined and autonomous. Finally, internalization is a motivated process in which individuals are inherently motivated to internalize and integrate within themselves the regulation of uninteresting activities that are useful for effective functioning in the social world (Deci & Ryan, 2000). The extent to which internalization and integration proceed effectively is a function of the social context of the individual (Deci, Vallerand, Pelletier, & Ryan, 1991).

**Social Context**

Activity engaged in by humans occurs within a social context, whether real or imagined. As individuals study or perform, others often observe or provide feedback. In the absence of others, individuals have the capacity to imagine what and how others may want them to do something (Deci & Ryan, 1990). The quality of the individual’s actual or imagined presence, as well as the quality of the broader social context within which we interact with others, can have an important effect not only on behavior but also on feelings about ourselves and impact on our overall development (Deci & Ryan, 1990).

One of the central tenets of SDT is that the quality of social contexts influences the motivation, performance, and well-being of individuals. Using the concepts of autonomy versus control to characterize the social context, SDT hypothesizes that autonomy-supportive contexts tend to facilitate self-determined motivation, healthy development, and optimal functioning (Black & Deci, 2000). Contexts that are autonomy-supportive minimize the use of external incentives, threats, avoid controlling
language, and acknowledge the student’s perception results in enhanced autonomous motivation and facilitate learning, academic performance, and adjustment (Ryan & Connell, 1989). Social contexts that support students being competent, autonomous, and related will promote intrinsic motivation (Deci et al., 1991). The need for competence, autonomy, and relatedness are considered important for psychological health and the determination of intrinsic versus extrinsic motivation to achieve. SDT focuses on the consequences of the extent to which individuals are able to satisfy their needs within social environments (Gagne & Deci, 2005) and intrinsically motivated behaviors are based in individuals’ needs to feel competent and self-determined (Deci, 1975). Intrinsic motivation will be facilitated by conditions that cultivate the basic psychological needs satisfaction (Deci & Ryan, 2000).

SDT proposes that the social context influences the extent to which individuals are autonomous versus controlled. Identification of the basic psychological needs provides a base for predicting the aspects of the social context that promote intrinsic motivation and facilitate internalization of extrinsic motivation (Gagne & Deci, 2005). According to Deci and Ryan (1985) an autonomy-supportive environment is one in which an individual in power considers the other’s perspective, acknowledges the other’s feelings, and provides the other with relevant information and opportunities for choice, while minimizing the use of pressure and demands. A study by Black and Deci (2000) found that college students’ grades and autonomous motivation increased in an organic chemistry course with autonomy supportive instructors. Similarly, a study by Williams and Deci (1996) found that instructor autonomy support predicted a significant increase in medical students’ autonomous motivation, perceived competence, and value of
psychosocial medicine in a medical interviewing course. Research suggests that autonomy supportive classroom environments were associated with more intrinsic motivation and internalization (Grolnick & Ryan, 1989) rather than controlling classrooms. Conversely, Vansteenkiste et al., (2004) tested the self-determination hypothesis and found that intrinsic versus extrinsic goals and autonomy-supportive versus controlling learning climates improved students’ learning, performance, and persistence.

Kahn (2001) conducted a study using Kahn and Scott’s (1997) model of scholarly activity to predict counseling psychology student scholarly activity. Results suggested that scholarly activity is predicted by research interest, research self-efficacy, and the students’ year in the doctoral program. In addition, a significant indirect predictor was the research training environment. The study results were consistent with the theory that the social context facilitates student involvement in research because of student interest, self-efficacy, and confidence in research competence. The research training environment is an essential force in student scholarly activity outcome (Kahn, 2001; Kahn & Scott, 1997). The results of this study are congruent with the SDT theory of autonomy-supportive contexts for promoting intrinsic motivation, basic psychological needs satisfaction, and achievement.

Self-determination theory focuses on autonomy support, structure, and involvement as three dimensions for assessing the social context (Deci & Ryan, 1985; Grolnick & Ryan, 1989; Sheldon, Ryan, Deci, & Kasser, 2004). Autonomy support, the opposite of control, provides choice, minimizes pressure to perform in specified ways, and encourages initiation. Deci and Ryan (1990) refer to an autonomy-supportive relationship that is responsive with respect to an internal frame of reference and is able to
promote action with respect to perceptions and needs. Secondly, the structure dimension refers to the degree to which behavior-outcome contingencies are comprehensible, clear expectations, and feedback is provided (Deci & Ryan, 1990). The degree of structure in the social context directly affects an individual’s self-efficacy and perception of control (Skinner, Wellborn, & Connell, 1990). Lastly, involvement describes the degree to which significant others are a basis of support. Based on Deci and Ryan’s (1985; 1990; 2000) work on motivation and self-determination theory, social contexts that are autonomy-supportive, provide structure, and contain involved individuals are optimal conditions for encouraging self-determined engagement, intrinsically motivated factors and promoting development. Conversely, social contexts that control others run the risk of undermining self-determination and autonomy while impacting development and basic psychological needs satisfaction. This process would prevent both satisfaction of the basic psychological needs and self-determination (Deci & Ryan, 1990).

A critical principle of self-determination theory states that the natural human tendency toward psychological growth and development does not operate in isolation but rather requires continuous nutriments and supports from the social environment to function effectively (Deci & Ryan, 2000). Therefore the social context of the individual has the potential to either support or prevent the innate tendencies for growth and goal pursuits. Based on the extent to which the needs are satisfied, individuals will function effectively, develop, and excel but to the extent that the needs are unsatisfied, individuals will evidence decreased functioning and motivation (Ryan & Deci, 2000).

Essential to self-determination theory are social contexts and individual differences in goal pursuits. Social contexts and individual differences that support
satisfaction of the basic needs facilitate natural growth processes including intrinsically motivated behavior and integration of extrinsic motivations, whereas those that forestall autonomy, competence, or relatedness are associated with decreased motivation, performance, and well-being (Deci & Ryan, 2000). Individuals will vary on levels of interest in activities as a function of the degree to which they experience need satisfaction while engaging in those activities.

Social Contexts, Intrinsic and Integration of Extrinsic Motivation

The essential nature of suggesting that there are basic psychological needs is that the needs provide a basis for predicting which aspects of a social context will support intrinsic motivation and facilitate internalization of extrinsic motivation (Gagne & Deci, 2005). Creating the appropriate context for this to occur may increase the scholarly activity of doctoral students and advance the profession of counseling through research and other forms of scholarship. Studies have found that autonomy-supportive interpersonal environments promote intrinsic and internalization and integration of extrinsic motivation that result in positive outcomes and productiveness (Gagne & Deci). Supports for autonomy are categorized as specific factors in the social context including choice and meaningful positive feedback and the interpersonal climate surrounding the situation. These categories promote both types of autonomous motivation, intrinsic motivation and integration of extrinsic motivation. Motivation, performance, and development will be maximized within social contexts that provide individuals the opportunity to satisfy their basic psychological needs for autonomy, competence, and relatedness (Deci, Eghrari, Patrick, & Leone, 1994; Deci, Vallerand, Pelletier, & Ryan, 1991).
Summary

The previous literature reflects the importance of scholarly activity to counselor education doctoral student development, promotion and tenure, to the advancement of the profession and the essential nature of intrinsic versus extrinsic goal aspirations to attainment of goals as a prediction of scholarship. In addition, the role of the social context in the facilitation or undermining of intrinsic and integration of extrinsic motivation to scholarly achievement was examined. The research supports the case for increased doctoral student scholarly activity evidenced by 2001 CACREP standards for doctoral student preparation and studies on counselor education doctoral program goals. The literature supports the case for examining intrinsic versus extrinsic goal aspirations and the social context in which doctoral student scholarly activity may be enhanced.
CHAPTER III: METHODOLOGY

This chapter describes the process for conducting the research study. A discussion of the research design, population, sampling plan, instrumentation, pilot study results, data collection, and analysis procedures are included in this chapter.

Research Design

The purpose of this study was to investigate the relationship between the frequency and perceived importance of the scholarly activity of counselor education doctoral students and the length of time in a doctoral program, intrinsic and extrinsic goal aspirations, and the social context of doctoral programs. The researcher conducted a random sample of counselor education doctoral student members of the American Counseling Association (ACA) and the Association for Counselor Education and Supervision (ACES), enrolled in programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and non-CACREP accredited programs. The researcher utilized SurveyMonkey.com to administer the instrument to a random sample of counselor education doctoral students online. The instrument consisted of independent variables to measure length of time in a doctoral program, intrinsic and extrinsic goal aspirations, and the social context of doctoral programs and dependent variables to measure the frequency and perceived importance of the scholarly activity of counselor education doctoral students. The statistical methods used in this research include descriptive statistics, correlations, ANOVA, multiple regression analysis, and post-hoc tests. Prior to conducting the actual study, the researcher conducted a pilot study of counselor education doctoral students in CACREP and non-CACREP counselor education doctoral programs to establish necessary revisions to the survey.
The hierarchical multiple regression research questions investigated how accurately the frequency and perceived importance of the scholarly activity can be predicted from length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations and the social context of doctoral programs. The entered order of the predictors in the hierarchical regression equation are length of time in a doctoral program, intrinsic total score, extrinsic total score, and social context total score for each dependent variable.

The null hypothesis for this study states that there was no relationship between the frequency of scholarly activity, and length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations, and the social context of doctoral programs. The second null hypothesis states that there is no relationship between the perceived importance of scholarly activity and length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations, and social context of doctoral programs.

Identification of Population

The population of interest was doctoral students in counselor education in programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and non-CACREP accredited programs in the United States. The accessible population was counselor education doctoral students in CACREP and non-CACREP accredited programs who are members of ACA and ACES. The doctoral students sampled had accrued varying lengths of time in their doctoral programs, expressed in either quarters or semesters. The sample was chosen because it provided the ability to gain information on the scholarly activity, length of time in doctoral program,
intrinsic goal aspirations, extrinsic goal aspirations of doctoral students, and the social contexts of doctoral programs across the United States.

Sampling Plan

The researcher obtained a list of counselor education doctoral student members of ACA and ACES currently enrolled in the CACREP and non-CACREP accredited programs. The researcher contacted ACA and ACES to request a random sample list from the population of counselor education doctoral student members. Doctoral students sampled are enrolled in universities listed in Counselor Preparation: Programs, Faculty, and Trends (Clawson, Henderson, Schweiger, & Collins, 2004). The researcher used SurveyMonkey.com to administer an online version of the survey to the randomized sample of doctoral students through email. Additionally, the researcher attempted to collect data from a convenience sample from universities included in the random sample from subjects that were not part of the random sample. The convenience sample was a means to supplement the analysis, increase response rate, and used as a validation sample for the original regression results.

For level of significance, power and effect size for the multiple regression analysis, 577 doctoral students were sampled expecting a 30% response rate. There were four predictors in the equation and an expected effect size of $\epsilon^2 (\rho^2) = .10$, $\epsilon = .03$, and $\gamma = .90$. A minimum sample size of 173 individuals are needed (Stevens, 2002).

Instrumentation

There were three instruments used in the study: (a) Doctoral Student Scholarly Activity Survey, (b) Aspirations Index (Kasser & Ryan, 1996), and (c) Perceived
Autonomy Support: The Learning Climate Questionnaire (LCQ; Williams & Deci, 1996) (see Appendix F).

Selection and Development of Instruments

The Doctoral Student Scholarly Activity Survey was constructed by the researcher based on the four forms of scholarship proposed by Boyer (1990; Glassick et al., 1997) and the Scholarly Activity Survey of Counselor Educators (Ramsey et al., 2002). The survey was constructed to correspond to doctoral level scholarship to measure the frequency and perceived importance of doctoral student scholarly activity. The reliability of the survey was investigated. The survey items measured the extent to which doctoral students engage in scholarly activity accounting for length of time in a doctoral program and perceived importance of the scholarly activities to excelling as a doctoral student. The survey consisted of doctoral student self-report that contained the subscales: frequency of scholarly activity and importance of scholarly activity. The frequency of scholarly activity subscale and the perceived importance of scholarly activity subscale focused on three forms of scholarship defined from the scholarship of discovery, integration, application, and teaching (Boyer, 1990). The subscale included a section on teaching activities that consisted of six questions, research that consisted of twelve questions, and service that consisted of four questions. The importance subscale consisted of ten questions that asked for doctoral students’ perceived importance of the scholarly activities contained in the frequency subscale to excelling as a doctoral student based on Boyer (1990). The Doctoral Student Scholarly Activity Survey pilot study had 29 total questions. Participants replied to the questions using a 7-point scale ranging from (0) = 0, to (6) = 6 or more indicating the frequency of scholarly activity as a doctoral student. An
example of an item from this scale includes, “Indicate the number of referred journal publications in which you were lead author as a doctoral student.” The importance of scholarly activities subscale contains 5 questions using a 5-point scale that ranged from (1) not at all important, to (5) extremely important. An example of a question from this scale includes, “Publications in refereed journals.” A higher response to the question indicates that the doctoral student views publishing in refereed journals as important to excelling as a doctoral student in their specific doctoral program. To obtain a frequency scale score, the sum of scholarly activity (dimensions of teaching, research, and service) divided by length of time in doctoral program (expressed as percent of academic years in quarters or semesters) is the total score. The importance scale was scored by adding the scores to obtain an importance score.

The Aspirations Index - Revised was created by Kasser and Ryan (1996) to assess individuals’ intrinsic goal contents and extrinsic goal contents. Alpha coefficients were .76 for the importance subscale and .76 for the likelihood subscales, alphas for the attainment subscale was not found (Kasser & Ryan). The Aspirations Index (Revised) had a total of seven aspiration categories including five specific items in each category. The categories included the intrinsic goal aspirations of meaningful relationships, personal growth, and community contributions; and the extrinsic goal aspirations of wealth, fame, and image. These six goal aspirations represent two distinct factors (Kasser & Ryan). Health, the seventh goal aspiration, is included in the revised version but defined as neither intrinsic nor extrinsic.

The survey consists of 105 questions that were answered by doctoral student self-report. Respondents rated: (1) importance of the goal, (2) chances of attaining it, and (3)
degree to which it has already been attained. All respondents replied to the questions using a 7-point scale ranging from (1) not at all, to (4) moderately, to (7) very. An example of an intrinsic life goal from this scale is, “Life-goal: To help others improve their lives.” An example of an extrinsic life goal from this scale is, “Life-goal: To be admired by lots of different people.” Higher scores designated by respondents indicate a higher importance, likelihood, and attainment of the intrinsic or extrinsic goal. The revised version used in this study has 30 items for six aspiration categories resulting in a total of 90 questions measured by doctoral student self-report. The scale was used as originally designed by Kasser and Ryan (1996) with the deletion of the health subscale with the intention of considering only psychologically-oriented variables and to maintain a balance between the number of intrinsic and extrinsic contents being contrasted. The score for the Aspirations Index involved calculating the subscales, and averaging the subscales resulting in eighteen subscale means. Finally, averaging all of the intrinsic and extrinsic scores resulted in individual scores for the index.

The Perceived Autonomy Support: Learning Climate Questionnaire (LCQ) was modified by Williams and Deci (1996) from the Health Care Questionnaire (Williams, Grow, Freedman, Ryan, & Deci, 1996). The 15-item measure was used with respect to specific learning settings to determine the degree to which the social context is autonomy supportive. The LCQ asks self-report questions on a 7-point Likert scale ranging from (1) strongly disagree, to (4) neutral, to (7) strongly agree. The questions measure the degree to which faculty in doctoral programs support doctoral student autonomy (e.g., “I feel that faculty provide me with choices and options”). The questions were adapted to reflect faculty rather than instructor as in the original questionnaire. The questions are
sometimes adjusted so that the wording pertains to the particular situation being studied (Williams & Deci). The 15 items have been validated in a study by Williams and Deci (1996) in which second-year medical students in a six-month interviewing course perceived their instructors as more autonomy supportive and were found to have an increase in interest, perceived competence, and autonomy. The alpha reliability of the scale was .96 and the study provided evidence of good internal consistency and construct validity for the LCQ. The LCQ has a single underlying factor with high internal consistency (Williams & Deci). The sum of the 15 items in the questionnaire is the total social context score for the Perceived Autonomy Support: Learning Climate Questionnaire (LCQ) (Williams & Deci).

Demographics and general information about the respondents was collected. Descriptive information was collected regarding the length of time in a doctoral program delineated as quarter or semesters, professional licensure and certification obtained, professional membership, and CACREP or non-CACREP program accreditation. A demographic questionnaire consisted of questions regarding age, gender, and race. The descriptive information provided data on counselor education doctoral students in the United States and information for post hoc tests.

Pilot Study Results

Upon receipt of IRB approval, the pilot study was conducted as a small scale study to test and refine survey items and format, and to gather preliminary data prior to conducting the actual study. A convenience sample of 30 counselor education doctoral students from five universities, Idaho State University, Kent State University, Ohio University, University of Akron, and University of Toledo received an email invitation to
participate in the pilot study. Participants who were enrolled in CACREP and non-CACREP counselor education doctoral programs were included. The survey took approximately 20 minutes to complete. The researcher received 22 completed surveys for analysis. One participant submitted multiple responses for numerous questions on the frequency of scholarly activity subscale of the Doctoral Student Scholarly Activity Survey. In addition, one participant failed to complete a total of seven items on the frequency of scholarly activity subscale of the Doctoral Student Scholarly Activity Survey. In addition, for the frequency of scholarly activity subscale, one respondent omitted one item (or 4% of the total items); another participant omitted three items (or 12.5% of the total items). In order not to lose these participants for the multiple regression analysis, the missing items were scored using the group mean for that specific item. Imputing means is a practice in which missing values are replaced by the average score for that item (Schafer & Graham, 2002). The final sample consisted of 20 counselor education doctoral students in the multiple regression pilot analysis of the 22 surveys returned for analysis. All of the 22 participants completed the demographics and the importance of scholarly activity scale. The average age of the participants was 33, with a range from 24 to 48. The majority of the participants identified themselves as Caucasian. Three participants identified as African-American, two as Asian, one as multi-racial, and one as other. Fourteen participants identified as female and eight participants were male.

The pilot study consisted of 100% of the participants from CACREP accredited programs. The 22 pilot study participants consisted of 45.5% licensed professionals, while 18.2% hold the professional clinical counselor license, 4.5% hold the national certified counselor certification, and 9.1% licensed as school counselors. In the pilot
study, all of the participants were student members of professional counseling associations. Of the participants, 54.5% were student members of the Association for Counselor Education and Supervision (CES), 27.3% were student members of the Association for Group Work (ASGW), 9.1% were student members of the Association for School Counseling Association (ASCA), 68.2% were members of Chi Sigma Iota (CSI) and 59.1% were members of other professional counseling associations.

The survey administered in the pilot study consisted of two scales: (a) Doctoral Student Scholarly Activity Survey and (b) the Aspirations Index (Kasser & Ryan, 1996). Results from the Doctoral Student Scholarly Activity Survey measured the frequency and perceived importance of scholarly activity over the course of doctoral study. The scholarly activity measure consisted of two subscales: frequency of scholarly activity and perceived importance of scholarly activity. The frequency score for the frequency of scholarly activity subscale was first derived by summing the point values of each item and then dividing the score by length of time in the doctoral program to obtain a frequency index (defined as the amount of scholarly activity per year). The raw score was unable to account for differences among students in the amount of scholarly activity engaged in, due to differences in the length of time they were enrolled in doctoral programs. The importance score for the importance of scholarly activity subscale was derived by summing the point values of the items asking participants to rate the importance of five scholarly activities from a personal viewpoint. The scores ranged from (0) = 0 to (6) = 6 or more indicating frequency of activity in each scholarly area. Results from the importance of scholarly activity measure consisted of rating the importance of scholarly activities to excelling as a doctoral student. The scores ranged from (1) not at
all to (5) very important, with higher scores indicating higher level of importance. The average score of the frequency subscale was 13.6 (SD = 14.7), while the average score on the importance subscale was 20.8 (SD = 2.9).

Results from the Aspirations Index (Kasser & Ryan, 1996) indicated the importance individuals place on intrinsic versus extrinsic goal aspirations. The measure consists of six dimensions that are assessed: the intrinsic aspirations (i.e., meaningful relationships (five items), personal growth (five items), and community contributions (five items); and the extrinsic aspirations (i.e., wealth (five items), fame (five items), and image (five items). Respondents answered 90 questions, rating 30 aspiration items on three dimensions: (1) importance of the goal, (2) chances of attaining it, and (3) degree to which it has already been attained. The scores for each dimension were on 7-point Likert scale for importance, (1) not at all to (4) moderately to (7) very, with higher scores indicating a higher importance, likelihood, and attainment of the intrinsic or extrinsic aspiration. The average score on the intrinsic scale was 6.0 (SD = .59), while the average score on the extrinsic scale was 3.2 (SD = 1.0). Previous research on the Aspirations Index has been altered to fit specific studies on goal contents. Alpha coefficients ranged between .72 and .89 for importance ratings; with a mean of .82. For the likelihood ratings, alphas ranged from .70 and .84; with a mean of .79. Alpha coefficients for the importance subscales ranged from .72 to .89; resulting in a mean of .82. Alpha coefficients for the likelihood subscales ranged from .70 to .84; resulting in a mean of .79. Alpha coefficients for the degree attained subscales were not reported (Kasser & Ryan, 1993). In some analyses, the extrinsic score is calculated by averaging the subscale
scores for the three extrinsic aspirations and an intrinsic score was calculated by averaging the subscale scores for the three intrinsic aspirations (Kasser & Ryan).

Suggestions for Improvement Based On the Pilot Study

Several suggestions for improving the study were provided by the respondents in the pilot study. The Doctoral Student Scholarly Activity Survey is composed of two subscales including Scholarly Activity and Ratings of Scholarly Activities. Based on participant confusion of scale titles related to content, the researcher reworded the scale titles for clarity of purpose to Frequency of Scholarly Activity and Importance of Scholarly Activity. Questions #1 through #7 of the pilot study consisted of questions pertaining to the scholarship of teaching. One respondent skipped question #2, which dealt with co-teaching of graduate courses as a doctoral student. Two respondents identified questions #5 and #6 as confusing. These questions pertained to supervision of practicum and internship students. The researcher did not change the wording of these questions based on the minimal number of respondents that reported difficulty with interpretation. The pilot study respondents were asked an open-ended question regarding the questions on scholarly works pertaining to teaching. The majority of the feedback was positive as the respondents found the pilot survey to adequately address the scholarship of teaching.

Questions #8 through #23 pertained to scholarly research and publication. One respondent skipped question #10, which dealt with being first author of a publication in a refereed journal as a doctoral student. One respondent skipped question #13 pertaining to submitting a proposal for a professional presentation to the Ohio Counseling Association conference as a doctoral student. The pilot study respondents were asked an open-ended
question regarding the questions on scholarship pertaining to research and publication including other written works. Comments related to doctoral student experiences writing grants, and manuscripts for publication.

Questions #24 through 27 on the frequency subscale pertained to service to the profession. One respondent indicated a need for a definition of leadership. One respondent was confused by the title of the section as scholarly works pertains to research, publications, and professional presentations only. A question was added to provide the option to indicate being a student representative of a professional counseling association, totaling 30 survey questions. The pilot study respondents were asked an open-ended question regarding the questions in the category of scholarly work pertaining to service. Participant comments related to doctoral student experiences in leadership positions. Finally, based on the results of the pilot study, this researcher changed the format of the frequency of scholarly activity subscale to an open-ended format.

The Importance subscale of the Doctoral Student Scholarly Activity Survey consisted of questions #28 through #33 of the pilot study. Two respondents identified the section as unclear regarding rating scholarly activity as important to doctoral study or to the individual. Revising the instructions for this area to specify rating importance of scholarly activities to excelling as a doctoral student, from a personal viewpoint, in their respective doctoral program was beneficial for the actual study. The revisions to the pilot include adding five questions for importance of specific activities and rewording the questions. The questions for the actual study were #26 through #35 after revisions. Additionally, the format of the questions in the survey were changed to a horizontal format rather the vertical for the purpose of shortening the appearance of length of the
survey. Finally, based on results of the pilot study, this researcher changed the format of the Importance of Scholarly Activity subscale that contained 5 questions using a 5-point scale that ranged from (1) not at all important, to (5) extremely important to 10 questions with scores ranging from (4) extremely important to (0) not at all important for increased clarity based on pilot study feedback.

The Aspirations Index (Kasser & Ryan, 1996) questions were listed on the pilot survey from #34 through #66. At the end of each page, respondents were asked open ended questions regarding the ability of the previous section to address intrinsic versus extrinsic goal contents. One respondent skipped questions #60, and #62 through #65. One respondent suggested ensuring one answer for each question on the survey as the respondent had the freedom to check multiple answers. The researcher corrected the format of the survey to allow only one answer per question. There were a few misspelled words that the researcher corrected for the actual study. The final section of the pilot survey collected demographic information; no suggestions were received for this section.

Respondents were asked open-ended questions regarding the ability of the survey to address doctoral student scholarly activity and intrinsic and extrinsic goal aspirations. The majority of the feedback was positive as most respondents found the survey addressed the various aspects of scholarly activity and had high potential to address intrinsic and extrinsic aspirations related to scholarship. However, a few respondents commented on grammatical errors. The researcher corrected the grammatical errors for the actual study. Finally, some respondents remarked a few questions were confusing and needed more specific instructions. This was corrected by rewording the instructions to clarify the focus of questions.
In addition, the researcher found it beneficial to include an additional predictor to
determine the social context of doctoral programs and its impact on doctoral student
scholarly activity. In summary, this study included the Perceived Autonomy Support:
Learning Climate Questionnaire (Williams & Deci, 1996) to determine the relationship
between social context of doctoral programs and scholarly activity.

Reliability Issues

The Doctoral Student Scholarly Activity Survey demonstrated adequate
reliability. Due to a lack of previous research on this scale, issues of reliability and
validity must be addressed from the pilot study. Cronbach’s alpha was used to measure
the internal consistency of the survey. Alpha coefficient for the survey was .89 for the
frequency score indicating high internal reliability. The frequency scale consisted of 22
items and 21 participants in the sample. The importance alpha was .73. The importance
subscale consisted of five items and 22 participants in the sample. The pilot study data
suggests that the survey demonstrated strong internal consistency and would be a reliable
measure for this study.

The Aspirations Index (Kasser & Ryan, 1996) demonstrated adequate reliability.
Kasser and Ryan reported alpha coefficients to measure the internal consistency of the
original index. The Aspirations Index was normed on 192 undergraduates in a
psychology course at the University of Rochester. The gender of the undergraduates
included 71 males and 107 females. Although this index was normed on undergraduate
psychology students, the construct of aspirations should apply consistently to doctoral
level students. The original version of the questionnaire included the importance and
likelihood dimensions (Kasser & Ryan). Alpha coefficients ranged between .72 and .89
for importance ratings; with a mean of .82. For the likelihood ratings, alphas ranged from .70 and .84; with a mean of .79. Alpha coefficients for the importance subscales ranged from .72 to .89; resulting in a mean of .82. Alpha coefficients for the likelihood subscales ranged from .70 to .84; resulting in a mean of .79. Alpha coefficients for the degree attained subscales were not found. The intrinsic importance and likelihood aspiration scores were correlated $r = .68$, and the extrinsic scores were correlated $r = .65$. The intrinsic and extrinsic importance scores were correlated $r = .23$ ($p < .01$), and the likelihood scores were correlated $r = .54$ ($p < .01$). Kasser, Ryan, Zax, and Sameroff (1995) surveyed teenagers on the importance and likelihood scales including intrinsic goal contents and alpha coefficients were for self-acceptance .55, affiliation .63, and community contribution at .64. The extrinsic goal content was financial success, alpha of .73. The four domains were chosen based on the identification as distinct goals determined by researchers (Kasser et al.).

Validity Issues

The Doctoral Student Scholarly Activity Survey demonstrated adequate validity. Content validity of the scholarly activity survey is demonstrated based a multidimensional definition of academic tenure defined as discovery, integration, application, and teaching (Boyer, 1990). Specifically, scholarly activity refers to scholarly accomplishment that contributes and advances a profession through the areas of scholarship. The Scholarly Activity Survey of Counselor Educators (Ramsey et al., 2002) was used as a foundation when constructing the Doctoral Student Scholarly Activity Survey to measure the frequency and perceived importance of doctoral scholarship. Specifically defined, the forms of scholarship contain scholarly works including
publishing research in journals, conference presentations, and other published works, other written works, professional activities, and professional leadership roles, and teaching, indicated as instructing undergraduate and graduate students, designing and implementing courses, and co-teaching with faculty (Ramsey et al., 2002). Scholarship entices emerging scholars and influences research and practice (Glassick et al., 1997). In addition, the researcher consulted with counselor education colleagues and other academic faculty regarding faculty expectations of doctoral student scholarship as well as criteria for promotion and tenure at their respective universities to compare with Boyer’s areas of scholarship. Finally, a list of scholarly activities was created with the activities that have been examined, based on prior inquiries and being a current doctoral student. Additional scholarly activities were added to the list to create a comprehensive survey of scholarly activity. The results of the correlation analysis show a positive correlation between intrinsic and extrinsic goal aspiration scores. This adds support for the construct validity of the survey in that the intrinsic and extrinsic goal aspiration scores appear to represent differing constructs.

Face validity of the Doctoral Student Scholarly Activity Survey was demonstrated through the pilot study respondents’ comments regarding the ability of the survey to address scholarly activity. Open-ended responses from the respondents regarding the survey’s ability to measure what it was intended to measure included comments that the questions were a “comprehensive assessment,” “holds a high level of potential to address scholarship,” “touched on the various aspects of scholarly activity.” This suggests that the respondents found the survey to have face validity.
The Aspirations Index - Revised (Kasser & Ryan, 1993) scale demonstrated adequate validity. The original version of the questionnaire included the importance and likelihood dimensions (Kasser & Ryan). Alpha coefficients ranged between .72 and .89 for importance ratings; with a mean of .82. For the likelihood ratings, alphas ranged from .70 and .84; with a mean of .79. This survey demonstrates adequate construct validity to be used in the current study.

Procedures for Collecting Data

After receiving approval from the Institutional Review Board (IRB), the procedures used to collect data for this study involved the researcher contacting the American Counseling Association (ACA) and the Association for Counselor Education and Supervision (ACES) to obtain an email list of counselor education doctoral students in CACREP and non-CACREP accredited programs across the United States. The researcher used SurveyMonkey.com to administer an online version of the survey to a randomized sample of 577 doctoral students through email. The researcher provided informed consent to the respondents to complete the survey. The respondents were invited to participate in the survey on a voluntary basis. The participants were directed to SurveyMonkey.com by clicking on a link indicated in the emails and then completed the Doctoral Student Scholarly Activity Survey. In order to track responses of the subjects, an identification number was assigned to each participant by SurveyMonkey.com in a specific field data. The identification number was indicated on the subject’s email address and allowed the researcher to identify specific subjects that had or had not responded to the survey. Following a two week period, the researcher sent a second email requesting that non-respondents complete the survey. One week later, the researcher sent
a third email to non-respondents requesting completion of the survey with the additional option to copy the survey link rather than clicking the link in the email to enter the survey. In addition, the researcher attempted to collect data from a convenience sample of participants not included in the random sample as a means to increase the response rate, supplement the analysis, report similarities and differences between the two groups, and use the convenience sample as a validation sample for the original regression results. The convenience sample was not viable based on the end of the semester making it difficult to obtain responses from doctoral students. The effort to prove that there are no differences among the convenience sample containing four responses and the random sample would not be relevant since the variances would be so different.

The researcher received a 73% response rate for the pilot study through SurveyMonkey.com. Responses from a total of 20 participants were included for the hierarchical regression analyses and 22 participants completed the demographics. The counselor education doctoral students that participated in the pilot study represented five CACREP accredited programs from the following universities: Idaho State University, Kent State University, Ohio University, University of Akron, and University of Toledo. The actual study consisted of a more diverse group of doctoral students from CACREP accredited and non-accredited programs.

Data Analysis Procedures

The research design of this study was ex post facto, specifically a co-relational design, since the independent variables were measured and not manipulated. The researcher in a co-relational design collects data from a sample of counselor education doctoral students and attempts to find a relationship within the data (Tuckman, 1999).
Testing the research questions consisted of conducting alphas for the scales in the study; analysis of correlations among items in the scales: frequency and importance scales of the Doctoral Student Scholarly Activity Survey, and descriptives. Two hierarchical regression analyses were conducted to evaluate the individual and combined ability of the following variables in this precise order: length of time in doctoral program, intrinsic and extrinsic aspiration goals, and social context of doctoral programs to predict the frequency and perceived importance of doctoral level scholarly activity. The ordering of the predictors was based on motivation literature (Ryan & Deci, 2000) and studies (Kahn, 2001; Kahn & Scott, 1997; Williams et al., 1997). Hierarchical multiple regression is appropriate for studies with nonexperimental designs (Green & Salkind, 2003).

The descriptive statistics that were examined in this study include frequency, mean, standard deviation, range, and z-scores. The data was screened for missing values, and extreme values (Schafer & Graham, 2002). Schafer and Graham were consulted for an appropriate method of dealing with missing data. The data was tested for normality using the Kolmogorov-Smirnov test of normality and scatterplot of ZPRED and ZRESID to assess homoscedasticity and linearity. Supplemental analyses were run including the Pearson-Product correlations.

Assumptions of tests and test for compliance

The random-effects model assumptions underlying the significance test for the multiple correlation coefficient is appropriate for nonexperimental studies (Green & Salkind, 2003). The assumptions are that the variables are multivariately normally distributed in the population, the cases represent a random sample from the population
and that the scores on variables are independent of other scores on the same variable, and lack multicollinearity (Green & Salkind). The normality assumption was tested using the Kolmogovrov-Smirnov test of normality. The second assumption was that the cases represent a random sample of the population and that the scores on variables are independent of other scores on the same variable. The researcher obtained a randomized list of doctoral student members of ACA and ACES as a representative sample of the population. Thirdly, correlations and tolerance scores were examined to assess for multicollinearity.

Summary

This chapter provided a discussion of the methodology used to investigate the relationship between doctoral student scholarly activity, length of time in a doctoral program, intrinsic versus extrinsic goal aspirations, and the social contexts of doctoral programs, and a discussion of the pilot study results. The procedures for the actual study were outlined including a discussion of the research questions/hypotheses, sample selection, surveys, reliability/validity analysis, descriptive statistics, hierarchical regression analysis, and supplemental analysis. The following chapter presents an analysis of the procedures including a description of the participants, sample characteristics, reliability analysis, and descriptive data. The results of the null hypotheses and supplemental analyses are presented.
CHAPTER IV: RESULTS

The purpose of this study was to investigate the relationship between the scholarly activity of counselor education doctoral students, length of time in doctoral program, intrinsic versus extrinsic goal aspirations, and social context of doctoral programs. The study investigated counselor education doctoral students to determine if there was a significant relationship between the frequency and perceived importance of scholarly activity and length of time in doctoral program, intrinsic versus extrinsic goal aspirations and the social context of doctoral programs.

This chapter presents an analysis of the procedures described in chapter 3. A description of the participants, reliability analyses, and descriptive data are presented. Inferential statistics were conducted to test the null hypothesis. Results of the null hypothesis test and supplemental analyses are presented.

The participants in this study were counselor education doctoral students sampled in the course of their doctoral programs. Each participant completed a demographics questionnaire and three instruments: the Doctoral Student Scholarly Activity Survey, the Aspirations Index (Kasser & Ryan, 1993), and the Perceived Autonomy Support: Learning Climate Questionnaire (Williams & Deci, 1996) (see Appendix D).

Description of Participants

A list of 577 counselor education doctoral students across the United States was obtained, although a total of 502 were sampled due to invalid email addresses and master’s level students in the sample. The researcher collected data from a random sample of ACA and ACES doctoral student members. Of the 105 returned surveys, two were not included in either of the analyses due to not completing the survey and one
participant was dropped from the first analysis due to an outlying score of 142.42 (mean = 10.75, SD = 15.81), which caused a severe positive skew. Responses from a total of 102 participants were included for the statistical analyses in this research study for the dependent variable Frequency of scholarly activity and 103 participants for the second dependent variable Importance of scholarly activity.

The respondents were randomly sampled from CACREP and non-CACREP accredited counselor education doctoral programs. Of the respondents, 83 (80.6%) were from CACREP accredited counselor education programs while 20 (19.4%) were from non-CACREP accredited counselor education programs. The demographic questionnaire consisted of questions regarding age, gender, race, length of time in doctoral program, and licensure and certification obtained. Information from the demographic data is summarized in Table 1.

Demographic Characteristics

A crosstabulation analysis was conducted on the characteristics of the sample. The age of the participants ranged from 25 years to 63 years of age, with the mean being 41 years of age and (SD = 10.7%). One hundred three participants responded to the question regarding gender. Of the respondents, 72 (69.9%) were Caucasian consisting of 48.5% (50) females and 21.4% (22) males, 19.4% (20) were Black/African Americans consisting of 12 (11.7%) females and 8 (7.8%) males, 4.9% (5) American Indian/Alaska Natives consisting of 3 (2.9%) females and 2 (1.9%) males, 3.9% (4) were other consisting of 2 (1.9%) females and 2 (1.9%) males, and 1.9% (2) were of Asian decent consisting of 1 (1.0%) female and 1 (1.0%) male counselor education doctoral student.
Table 1

*Gender and Race of Sample*

<table>
<thead>
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<th>Gender</th>
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<th>Female</th>
</tr>
</thead>
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</tr>
<tr>
<td>African American/Black</td>
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<td>8</td>
<td>12</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>103</td>
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<tr>
<td>Asian</td>
<td>103</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Length of time in program*

All 103 participants answered the question regarding the length of time students are currently enrolled in a doctoral program. Of the respondents, the length of time in a doctoral program ranged from .25 to 8.00 with the mean of 2.22 (SD = 1.20) semesters completed in the doctoral program. Values for quarters were computed as semesters.

*Accreditation, Professional Licensure/Certification and Professional Membership*

Of the 83 (80.6%) doctoral student participants in CACREP accredited programs, 44 (42.7%) were licensed professional counselors while 39 (37.9%) were not licensed professional counselors; 16 (15.5%) were licensed professional clinical counselors while 67 (65%) were not licensed professional clinical counselors; 33 (32%) were national certified counselors while 50 (48.5%) were not nationally certified counselors; 15
(14.6%) were licensed school counselors while 68 (66%) were not licensed school counselors; and 12 (11.7%) held no professional licensure or certification.

Of the 20 (19.4%) doctoral student participants in non-CACREP accredited programs, 9 (8.7%) were licensed professional counselors while 11 (10.7%) were not licensed professional counselors; 4 (3.9%) were licensed professional clinical counselors while 16 (15.5%) were not licensed professional clinical counselors; 6 (5.8%) were national certified counselors while 14 (13.6%) were not nationally certified counselors; 5 (4.9%) were licensed school counselors while 15 (14.6%) were not licensed school counselors; and 3 (2.9%) held no professional licensure or certification.

All 103 participants answered the question regarding membership in professional organizations that enhance scholarly activity in teaching, research, and service. Of the respondents, 98 (95.1%) were doctoral student members in national organizations including ACA, ACES, and Chi Sigma Iota, 27 (26.2%) were members of regional associations, and 75 (72.8%) were members of state associations. Descriptive data obtained regarding the CACREP accreditation status of the doctoral programs, and characteristics of the sample are summarized in Table 2.
Table 2

Accreditation and Licensure of Sample

<table>
<thead>
<tr>
<th>Accreditation</th>
<th>CACREP</th>
<th>non-CACREP</th>
</tr>
</thead>
<tbody>
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<td>Licensed Professional Counselor</td>
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<td>9</td>
</tr>
<tr>
<td>Licensed Professional Clinical Counselor</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Licensed School Counselor</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>National Certified Counselor</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>No Professional License/Certification</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

Finally, additional characteristics of the 103 participants include 21 (20.4%) have taught 1-2 graduate level courses while 7 (6.8%) have taught 3 graduate level courses. Of the participants, 44 (42.7%) have co-taught 1-2 graduate courses while 10 (9.7%) have co-taught 3 graduate level courses. Among the participants, 21 (20.4%) have 1-2 refereed publications whereas 27 (26.2%) have 1-2 non-refereed publications. Of the participants, 29 (28.1%) have conducted 1-2 presentations at national conferences while 25 (24.3%) have conducted 1-2 presentations at state conferences. Of the 103 participants, 42 (40.8%) have held 1-2 leadership positions, and 38 (36.9%) have been on 1-2 counseling association committees as a doctoral student.

Among the participants, 45 (43.7%) reported refereed publications as extremely important, 32 (31.1%) reported non-refereed publications as somewhat important, 39
(37.9%) reported lead author in national, regional, and state conferences as extremely important and 35 (34%) of the participants reported co-presenters in national, regional, and state conferences as extremely important. In addition, 35 (34%) found being lead author of other written works as moderately important and 34 (33%) found co-authoring other written works as moderately important to excelling as a doctoral student. Of the participants, 36 (35%) reported teaching as extremely important, and 39 (37.9%) reported student evaluations and feedback as extremely important to scholarly teaching. The participants reported 33 (32%) indicating service as extremely important, and 41 (39.8%) reported other professional scholarly activities as moderately important.

Of the 103 participants, 34 (33%) strongly agreed that faculty provide choices and options, 27 (26.2%) strongly agreed that faculty understand them, 26 (25.2%) strongly agreed they can be open with the faculty, 45 (43.7%) strongly agreed the faculty have conveyed confidence in their ability as a doctoral student. In addition, 33 (32%) strongly agreed that faculty accepts them, 36 (35%) strongly agreed that faculty explained goals of the doctoral program, 41 (39.8%) strongly agreed that faculty encourages asking questions, 31 (30.1%) strongly agreed having trust in their faculty. Additionally, 28 (27.2%) strongly agreed that the faculty answers their questions in entirety, 28 (27.2%) strongly agrees that faculty listens to their ideas, 21 (20.4%) strongly agrees that faculty handles their emotions well, 36 (35%) strongly agrees that faculty care about them, 20 (19.4%) strongly agree that faculty understand their perspective prior to suggestions, and 23 (22.3%) strongly agree that they can share feelings with their faculty.
Statistical Analyses to Test Null Hypothesis

Statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS) for Windows, version 12.0. Descriptive statistics were computed to test for assumptions, hierarchical regression analysis, and supplemental analyses.

Assumptions Testing for Multiple Regression Analysis

The assumptions underlying the significance test for the multiple correlation coefficient were multivariate normally distributed variables in the population, random sampling from the population, and lack of multicollinearity (Green & Salkind, 2003). The normality assumption was tested by examining the kurtosis scores, Kolmogorov-Smirnov tests, and residual plots. The second assumption, randomness of the sample was addressed by soliciting a random sample of the intended population. It must be noted, however, that not every doctoral student who was solicited responded to the survey, thus the final sample consisted of volunteers. Finally, lack of multicollinearity was addressed by examining the correlations between the independent and dependent variables and examining the tolerance scores.

Testing for normality was determined by examining the independent and dependent variable scores on kurtosis, Kolmogorov-Smirnov test, and residual plots. The kurtosis statistics were reviewed and the following distributions: Importance of scholarly activity (kurtosis = 1.60), social context (kurtosis = .51), and intrinsic (kurtosis = 1.55) and extrinsic (kurtosis = .49) aspirations did not differ too markedly from zero suggesting that these variables were normally distributed. The Frequency of Scholarly Activity distribution, however, did show some evidence of clustering typical of non-normal distributions (kurtosis = 47.27). For the Frequency subscale, mean = 9.46 (SD = 8.90),
ranged from .00-142.42, and a skewness of 5.93. The Importance subscale descriptives included mean = 29.0 (SD = 8.97), ranged from 9.00-60.00, with a skewness of .35, and a kurtosis = 1.60.

According to the Kolmogorov-Smirnov test of normality, the Frequency of Scholarly Activity subscale and length of time in doctoral program were found to be significant (p < .05) suggesting a violation of normality. However, the Importance of scholarly activity subscale, intrinsic score, extrinsic score, and social context scale did not violate the assumption of normality (p = or > .05). In regard to multivariate normality, the clustering of the residuals (see Appendix E) for Frequency of scholarly activity and Importance of scholarly activity did not deviate noticeably from normal distributions, thus the multiple regressions analyses were deemed appropriate.

Multicollinearity was determined by examining the tolerance scores. Collinearity diagnostics calculated the tolerance scores of the Frequency of scholarly activity scale for length of time in doctoral program (.995), intrinsic score (.815), extrinsic score (.959), and social context scale (.838). Additionally, multicollinearity did not seem to be a problem for the Importance of scholarly activity scale as evidenced by length of time in doctoral program (.996), intrinsic score (.812), extrinsic score (.959) and social context scale (.835). These values were not near zero and did not appear to violate the assumption of multicollinearity.
Hierarchical Regression Analysis

Two hierarchical regression analyses were conducted to evaluate the individual and combined ability of the following variables: length of time in doctoral program, intrinsic and extrinsic aspiration goals, and social context of doctoral programs to predict the frequency and perceived importance of doctoral level scholarly activity.

Testing of the Null Hypothesis

In order to answer the research question: “to what extent does the length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations and social context of doctoral programs predict frequency of scholarly activity?” the first null hypothesis was tested and stated that there is no relationship between the frequency of scholarly activity and length of time in the doctoral program, intrinsic goal aspirations, extrinsic goal aspirations and social context of doctoral programs. This was tested with a three model hierarchical regression, using the following order: length of time in doctoral program, intrinsic and extrinsic aspirations scores, and social context score. The results are presented in Table 3.
Table 3

*Results of a Hierarchical Regression Analysis with Four Predictors of Frequency of Scholarly Activity*

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>$R^2$ Change</th>
<th>$F$ Change</th>
<th>$p$ ANOVA</th>
<th>$p$</th>
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</thead>
<tbody>
<tr>
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<td></td>
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<tr>
<td>Length in Program</td>
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<td>.09</td>
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<td>Length in Program</td>
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<tr>
<td>Intrinsic Score</td>
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<tr>
<td>Extrinsic Score</td>
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<tr>
<td>Length in Program</td>
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<tr>
<td>Intrinsic Score</td>
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</tr>
<tr>
<td>Extrinsic Score</td>
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<td>.06</td>
<td>.00</td>
<td>.01</td>
<td>.93</td>
<td>2.5</td>
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<tr>
<td>Social Context</td>
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<td>.06</td>
<td>.00</td>
<td>.01</td>
<td>.93</td>
<td>2.5</td>
</tr>
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</table>
Table 4

Results of Coefficients with Four Predictors of Frequency of Scholarly Activity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
</tbody>
</table>

Model 1

- Length in Program: $-2.18$ (SE $0.71$), $β = -0.30$, $t = -3.08$, $p = 0.00$

Model 2

- Length in Program: $-2.17$ (SE $0.71$), $β = -0.30$, $t = -3.05$, $p = 0.00$
- Intrinsic Score: $0.82$ (SE $1.81$), $β = 0.04$, $t = 0.45$, $p = 0.65$
- Extrinsic Score: $0.60$ (SE $0.92$), $β = 0.06$, $t = 0.65$, $p = 0.52$

Model 3

- Length in Program: $-2.18$ (SE $0.72$), $β = -0.29$, $t = -3.03$, $p = 0.00$
- Intrinsic Score: $0.75$ (SE $1.98$), $β = 0.04$, $t = 0.38$, $p = 0.71$
- Extrinsic Score: $0.61$ (SE $0.93$), $β = 0.06$, $t = 0.65$, $p = 0.52$
- Social Context: $0.01$ (SE $0.05$), $β = 0.01$, $t = 0.09$, $p = 0.93$

Table 4 shows that although the ANOVA values were significant for every model, the addition of intrinsic, extrinsic, and social context scores did not significantly change the amount of explained variance ($F(2, 98) = .38$ p = .69) and ($F(1, 97) = .01$ p = .93) for models two and three respectively). The first model, containing one variable: length of
time in program, explained approximately 7.8% of the variance in the frequency of scholarly activity indices (based on adjusted value of $R^2$); the second model which also included intrinsic and extrinsic aspirations added approximately 6.6% more explained variance; while the final model, containing all four predictors, contributed no additional explained variance. With regard to the individual contribution of the predictors, an examination of the standardized coefficients echoes the findings for the combined contributions of these variables. The only statistically significant Beta weight for all three models was for length of time in program (Beta = -.29). The frequency of scholarly activity was negatively related to length of time in doctoral program. It may be concluded that although the null hypothesis was rejected ($p = .05$) level with the combined contributions of length of time in doctoral program, intrinsic and extrinsic aspirations, and social context scores, only length of time in doctoral program was responsible for the significant prediction equation.

Null Hypothesis 2

In order to answer the research question: “to what extent does the length of time in doctoral program, intrinsic goal aspirations, extrinsic goal aspirations and social context of doctoral programs predict importance of scholarly activity?” the second null hypothesis stated that there is no relationship between the perceived importance of scholarly activity and intrinsic goal aspirations, extrinsic goal aspirations and social context of doctoral programs. Another three block hierarchical regression was computed and the results are shown in Table 5.
Table 5

Results of a Hierarchical Regression Analysis with Four Predictors of Importance of Scholarly Activity

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>$R^2$ Change</th>
<th>$F$ Change</th>
<th>$p$ ANOVA</th>
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<tr>
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Table 6

Results of Coefficients with Four Predictors of Importance of Scholarly Activity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<td>.05</td>
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</table>

Table 6 shows that the final model containing all four independent variables produced a significant prediction equation (F = 2.97, p = .02). The third model explained approximately 10.8% of the variance of the outcome measure scores. The standardized coefficients show that social context made an independent significant contribution to explained variance (Beta = .21, p = .048). Specifically, as social context scores increased,
the importance of scholarly activity increased. The conclusion resulting from this regression analysis is that all four independent variables can significantly predict the importance of scholarly activity of doctoral students, while social context scores shouldered most of the variance burden.

Reliability Analyses on Research Instruments

*Doctoral Student Scholarly Activity Survey*

The Doctoral Student Scholarly Activity Scale demonstrated adequate reliability. The average score on the Doctoral Student Scholarly Activity subscale: Frequency of Scholarly Activity was 9.46, (SD = 8.90), range (.00-61.62). Cronbach’s alpha coefficient was used to measure the internal consistency of the scale. Alpha coefficient was $\alpha = .84$, which indicated a high level of reliability for the survey. In addition, each individual item was correlated with the total score. For the teaching subscale, it was found that all of the items showed a significant correlation ranging from $\alpha = .66$ to $\alpha = .72$ ($p < .01$) with the total score. All the correlations were greater than .40 except for one item: “Graduate courses designed and implemented” ($r = .34$). Based on this result, the item could be eliminated from the scale. This item represented an important teaching activity. In addition, for the research subscale it was found that most of the items showed a significant correlation ranging from $\alpha = .78$ to $\alpha = .83$ ($p < .01$) with the total score. All the correlations were greater than .40 except for 4 of the twelve items: “Non-funded grants authored”, “Funded grants authored”, “Refereed publications lead author”, and “Refereed publications co-authored.” Based on these results, these items could be eliminated from the survey. For the service subscale, it was found that all of the items ranged from $\alpha = .42$ to $\alpha = .57$ ($p < .01$) with the total score. One item could be
eliminated from the scale: “Leadership positions in Chi Sigma Iota” (r = .49).

Additionally, the Importance of Scholarly Activity subscale average score was 29.0, (SD = 8.98), range (9.00-60.00). Cronbach’s alpha coefficient was used to measure the internal consistency of the subscale in the study. Alpha coefficient was α = .93, which indicated a high level of reliability for the survey. In addition, each individual item was correlated with the total score. It was found that all of the items showed a significant correlation ranging from α = .91 to α = .93 (p < .01) with the total score. The reliability coefficient could not be compared to an established coefficient since this survey was created based on literature (Boyer, 1990; Glassick, Huber, & Maeroff, 1997; Ramsey et al., 2002).

**Aspirations Index**

The Aspirations Index (Kasser & Ryan, 1996) demonstrated adequate reliability. The average score on the Aspirations Index for the Intrinsic Scale was 6.12, (SD = .48) and for the Extrinsic Scale was 3.10, (SD = .94). Cronbach’s alpha coefficient was used to measure the internal consistency of each rating in the Aspirations Index for the Intrinsic and Extrinsic scales. Alpha coefficient for the intrinsic importance subscales was α = .78, alpha coefficient for the intrinsic likelihood of attainment was α = .83, and the alpha coefficient for actual attainment for the intrinsic was α = .88. Alpha coefficient for the extrinsic importance subscales was α = .91, alpha coefficient for the extrinsic likelihood of attainment was α = .90, and the alpha coefficient for the actual attainment for extrinsic was α = .88. The reliability coefficient for the importance rating reported by Kasser and Ryan (1996) ranged from α = .59 to α = .87; the mean was .76. Additionally, alphas for the likelihood subscales ranged from α = .68 to α = .86; the mean was .76.
which indicated a high level of reliability for the survey. These results, in addition to the results of the pilot study, suggest that the survey provided reliable results for the current research study.

*Perceived Autonomy Support: Learning Climate Questionnaire*

The Perceived Autonomy Support: Learning Climate Questionnaire (Williams & Deci, 1996) demonstrated adequate reliability. The scale average score was 78.4, (SD = 18.14). Alpha coefficient was $\alpha = .95$. The reliability coefficient was practically identical to $\alpha = .96$ reported by Williams and Deci (1996) which indicated a high level of reliability for the survey. In addition, each individual item was correlated with the total score. It was found that all of the items showed a significant correlation ranging from $\alpha = .94$ to $\alpha = .97$ ($p < .01$) with the total score. These results, in addition to the results of the pilot study, suggest that the LCQ provided reliable results for the current research study.

*Ad Hoc Analysis*

The survey utilized in the study consisted of three instruments: Doctoral Student Scholarly Activity Survey, Aspirations Index (Kasser & Ryan, 1993), and the Perceived Autonomy Support: Learning Climate Questionnaire (Williams & Deci, 1996). Means, standard deviations, and range for the predictor and criterion variables are summarized in Table 7.
Table 7

*Means, Standard Deviations, and Range for Doctoral Scholarly Activity Survey*

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>%</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Scholarly</td>
<td>102</td>
<td>100.0</td>
<td>9.46</td>
<td>8.90</td>
<td>.00 – 61.62</td>
</tr>
<tr>
<td>Importance of Scholarly</td>
<td>103</td>
<td>100.0</td>
<td>29.0</td>
<td>8.97</td>
<td>9.00 – 60.00</td>
</tr>
<tr>
<td>Intrinsic Scale</td>
<td>103</td>
<td>100.0</td>
<td>6.13</td>
<td>.48</td>
<td>4.33 – 6.93</td>
</tr>
<tr>
<td>Extrinsic Scale</td>
<td>103</td>
<td>100.0</td>
<td>3.10</td>
<td>.94</td>
<td>1.00 – 5.73</td>
</tr>
<tr>
<td>Social Context Scale</td>
<td>103</td>
<td>100.0</td>
<td>78.4</td>
<td>18.1</td>
<td>24.00 – 105.00</td>
</tr>
</tbody>
</table>

Responses on the Doctoral Student Scholarly Activity Survey items consisted of doctoral student self-report that contained the subscales: Frequency of Scholarly Activity and Importance of Scholarly Activity. Responses to the frequency subscale items were open-ended with higher scores indicating a higher extent of engagement in scholarly activity. The scores on the Frequency subscale were (M = 9.46, SD = 8.90). Responses to the importance subscale items ranged from (4) extremely important to (0) not at all important with higher scores indicating greater importance of scholarly activity to doctoral students. The scores on the Importance subscale were (M = 29.0, SD = 8.97).

Based on the item analyses conducted on the Frequency of Scholarly Activity subscale, the specific areas endorsed by participants were determined from the highest scores on the individual items (highest means range from .97-2.12). Items in the scholarly
activity of teaching included: graduate level course co-taught (mean = 1.56), and graduate level course taught (mean = 1.24). In addition, items in the scholarly activity of research included: proposals submitted at regional/state conferences (mean = 2.12); proposals submitted at national conferences (mean = 1.68); co-presenter at national conferences (mean = 1.28); co-presenter at state conferences (mean = 1.08); and lead presenter at state conferences (mean = 1.06). Additionally, items in the scholarly activity of service included: leadership positions (mean = 1.34), and members of professional association committees (mean = .97). These items were reported in the survey as the most highly endorsed items for frequency in scholarly activity during a doctoral program.

Specific items from the item analyses were determined as least engaged in by participants in the study as concluded by the lowest scores on individual items (lowest means range from .24-.49). Items in the scholarly activity of teaching included: graduate courses designed/implemented (mean = .40), and graduate courses co-designed/implemented (mean = .49). Items in the scholarly activity of research included: non-funded grants authored (mean = .24); refereed publications/lead author (mean = .34); funded grants authored (mean = .34); refereed publications co-authored (mean = .37); and non-refereed publications co-authored (mean = .41). Additionally, items in the scholarly activity of service included: leadership positions in Chi Sigma Iota (mean = .49).

Results from the Aspirations Index - Revised (Kasser & Ryan, 1996) indicated the individuals' intrinsic versus extrinsic goal contents. Respondents rated (1) importance of the goal, (2) likelihood of attaining the goal, and (3) degree to which the goal had already been attained. The responses to the individual life goal items ranged from (1) not at all to (7) very, with higher scores designated by respondents indicating a higher importance,
likelihood, and attainment of the intrinsic or extrinsic goal. The scores on the Aspirations Index, Intrinsic scale (M = 6.13, SD = .48) correspond to the scores (M = 3.18, SD = 1.0) found during the pilot study and Extrinsic scale (M = 3.10, SD = .94) correspond to the scores (M = 5.95, SD = .59) found during the pilot study. Kasser and Ryan (1996) reported the average score of the norm group intrinsic aspiration importance for male undergraduates was 4.3, (SD = 0.44), and female undergraduates was 4.6 (SD = 0.43), the average score of the norm group extrinsic aspiration importance for male undergraduates was 3.4 (SD = 0.75) and female undergraduates was 3.1 (SD = 0.71). The average score of the norm group intrinsic aspiration likelihood for male undergraduates was 3.9 (SD = 0.48) and female undergraduates was 4.1 (SD = 0.50), the average score of the norm group extrinsic aspiration likelihood for male undergraduates was 3.3 (SD = 0.65) and female undergraduates was 3.1 (SD = 0.55).

Results from the Learning Climate Questionnaire (LCQ): Perceived Autonomy Support (Williams & Deci, 1996) measured the degree to which the social context is autonomy supportive. Specific to the current study, it measures the degree to which faculty support doctoral student autonomy. The responses to the fifteen individual items on the scale ranged from (1) strongly disagree to (7) strongly agree, with higher scores indicating a higher degree of doctoral student autonomy within the doctoral program. The scores on the Learning Climate Questionnaire were (M = 78.4, SD = 18.1). Williams and Deci (1996) reported the average score of the norm group of the Learning Climate Questionnaire on autonomy support as 61.3, (SD = 10.2) for the internal medicine group and 54.2, (SD = 11.4) for the surgery group.
Supplemental Analyses

Correlations and t tests analyses were conducted to explore the data further. Correlations were conducted between the independent and dependent variables. Three significant relationships emerged. The correlation was statistically significant ($r = -0.30$, $p < 0.01$) between frequency of scholarly activity and length of time in doctoral program indicating that as frequency of scholarship increases, length of time decreases. Note that some relationship was expected since the frequency of scholarly activity variables use length of time in doctoral program as part of the measurement. The correlation between intrinsic aspirations was positively related to two variables: Importance of scholarly activity ($r = 0.20$, $p < 0.05$) and social context scores ($r = 0.39$, $p < 0.01$) (see Appendix F).

Independent sample $t$ tests analyses were conducted to explore the data further. An independent-sample $t$ test was conducted to evaluate the difference between counselor education doctoral students on the independent and dependent measures based upon CACREP program accreditation. Significant differences were noted for the frequency of scholarly activity ($t = 2.36$, $df = 100$, $p < 0.05$) with doctoral students from CACREP accredited programs (mean = 10.46, SD = 8.95) having the higher mean score in relation to doctoral students in non-CACREP accredited programs (mean = 5.35, SD = 7.57). In addition, a significant difference was noted between doctoral students at CACREP accredited and non-CACREP accredited programs with regard to social context ($t = 2.67$, $df = 47.22$, $p < 0.05$), with doctoral students from non-CACREP accredited programs (mean = 85.55, SD = 11.57) having the higher mean score than those from CACREP accredited programs (mean = 76.67, SD = 19.04) (see Appendix G). A correction was
applied to this last analysis since a Levene’s test for homogeneity of variance indicated that the group variances were unequal.

Summary

This chapter described the results of the study. The predictors length of time in doctoral program, intrinsic and extrinsic aspirations, and social context combined to significantly predict frequency of scholarly activity, but only length of time in doctoral program was responsible for the significant prediction equation. Length of time in doctoral program was negatively related to frequency of scholarly activity. As length in doctoral program decreased, frequency of scholarly activity increased. The second finding was that all four predictor variables were significantly related to the importance of scholarly activity, with social context scores accounting for the largest portion of explained variance. As social context increased, the importance of scholarly activity increased.

Additionally, supplemental analyses were conducted that resulted in significant relationships between intrinsic aspirations and the importance of scholarly activity and social context scores. Finally, $t$ tests for independent samples revealed significant differences between doctoral students in CACREP and non-CAREP accredited programs with regard to their frequency of scholarly activity and their perceptions of the social context of their doctoral programs. Doctoral students in CACREP accredited programs had a higher mean frequency score, while doctoral students from non-CACREP accredited programs had a higher mean social context score. The following chapter provides a discussion about the sample, null hypothesis, supplemental analyses, limitations, and recommendations for future research.
CHAPTER V: DISCUSSION

The purpose of this study was to investigate the relationship between counselor education doctoral student scholarly activity, length of time in doctoral program, intrinsic versus extrinsic goal aspirations, and the social context of doctoral programs. In this chapter, a discussion of the sample is presented. The results of the null hypothesis and the supplemental analyses are discussed and implications are presented. Finally, limitations of the study and recommendations for future research are discussed.

Sample Characteristics

The sample characteristics including response rate, gender, race, and licensure and certification will be discussed. The response rate for the study from the random sample was less than optimal at 20%. During the course of data collection, the random sample list decreased based on invalid email addresses and non-respondents. This researcher attempted to increase response rate with a convenience sample that was not viable due to time constraints of doctoral programs. According to the U.S. Department of Education, National Center for Educational Statistics (1999), an estimated 45,900 doctoral degrees will be awarded in the United States. Additionally, counselor education programs admit an average of nine doctoral students yearly (Clawson et al., 2004). A lower response rate may be based on the amount of doctoral students in counselor education programs nationally and the many demands of doctoral study that may limit doctoral students’ time to complete surveys.

This study included 66% female and 34% male counselor education doctoral students. There was a smaller number of male counselor education students in the study. This may be a result of nonparticipation, based on the random sampling, and the ratio of
male to female doctoral students in counselor education doctoral programs. According to The 2000 National Doctoral Program Survey (2001) reported 64% female and 33% male counselor education doctoral students participated in the study on graduate education. These previous results suggest that obtaining a sample with more female doctoral students was appropriate for the study.

Of the respondents, 72 (69.9%) were Caucasian consisting of 48.5% (50) females and 21.4% (22) males, 19.4% (20) were Black/African Americans consisting of 12 (11.7%) females and 8 (7.8%) males, 4.9% (5) American Indian/Alaska Natives consisting of 3 (2.9%) females and 2 (1.9%) males, 3.9% (4) were other consisting of 2 (1.9%) females and 2 (1.9%) males, and 1.9% (2) were of Asian decent consisting of 1 (1.0%) female and 1 (1.0%) male counselor education doctoral student. Similar results were found based on The 2000 National Doctoral Program Survey (2001), 74 were Caucasian, 5 were Black/African American, 3 were American Indian/Alaskan native, 4 identified as other, and 4 were Asian. The current sample of counselor education doctoral students appears to be similar to the national sample of counselor education doctoral students in The 2000 National Doctoral Program Survey (2001).

Finally, of the 83 (80.6%) doctoral student participants in CACREP accredited programs, 44 (42.7%) were licensed professional counselors while 39 (37.9%) are not licensed professional counselors; 16 (15.5%) were licensed professional clinical counselors while 67 (65%) were not licensed professional clinical counselors; 33 (32%) were national certified counselors while 50 (48.5%) were not nationally certified counselors; 15 (14.6%) were licensed school counselors while 68 (66%) were not
licensed school counselors; and 12 (11.7%) held no professional licensure or certification.

Of the 20 (19.4%) doctoral student participants in non-CACREP accredited programs, 9 (8.7%) were licensed professional counselors while 11 (10.7%) were not licensed professional counselors; 4 (3.9%) were licensed professional clinical counselors while 16 (15.5%) were not licensed professional clinical counselors; 6 (5.8%) were national certified counselors while 14 (13.6%) were not licensed professional clinical counselors; 5 (4.9%) were licensed school counselors while 15 (14.6%) were not licensed professional clinical counselors; and 3 (2.9%) held no professional licensure or certification.

All 103 participants answered the question regarding membership in professional organizations that enhance scholarship through research, conferences, presentations, and service. Of the respondents, 95.1% were doctoral student members in national organizations including ACA, ACES, and CSI, 26.2% were members of regional associations, and 72.8% were members of state associations. According to Chi Sigma Iota there are chapters at 277 universities (CSI, 2006) indicating the high rate of respondents that are members of national associations. The National Board of Certified Counselors (NBCC) has certified approximately 35,000 counselors including doctoral students.

Discussion of the Null Hypotheses

The hierarchical regression analysis rejected the null hypothesis that there was no relationship between frequency of scholarly activity and length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context of doctoral programs.
The results indicate that there was a significant relationship between frequency of scholarly activity and length of time in doctoral program. Length of time in doctoral program explained 7.8% of the variance. It was somewhat surprising that length of time in doctoral program was negatively related to frequency of scholarly activity, as this finding has been demonstrated in earlier research. There was an overall minimal amount of research examining length of time in doctoral programs and extent of scholarly activity. Kahn and Scott (1997) reasoned that students who have been in a program longer will have had more opportunities to learn about research and be involved in research then beginning students. In a study on predictors of graduate research, the structural equation model supported direct relationships between the graduate student’s year in program and research self-efficacy and involvement (Kahn, 2001). A substantial number of doctoral students are awarded assistanceships proving teaching and research experiences within their department which may explain higher rates of scholarly activity early in doctoral programs. During doctoral study, student involvement in teaching, research, and service may occur in more frequency in the first half of doctoral study. In addition, time constraints of being in a doctoral program including demands of coursework, and extent of involvement in a doctoral program may inhibit frequency of scholarly activity. Third year doctoral students typically have completed coursework and are in the dissertation phase. The result may be less involvement within the doctoral program resulting in a decrease in scholarly activity based on time constraints. The current study finding supported a previous study that examined doctoral student development. Doctoral students need to experience feedback that addresses expectations and explicitly deals with progress on scholarly dimensions during doctoral programs,
regardless of length of time in doctoral program (Austin, 2002; Nyquist, Austin, Sprague, & Wulff, 2001).

The predictors of intrinsic and extrinsic goal aspirations explained 0.7% more variance in frequency of scholarly activity, while social context contributed no additional explained variance of frequency. These results do not support the hypothesis that counselor education doctoral students will engage more frequently in scholarly activity as intrinsic goal aspirations increase, extrinsic goal aspirations decrease and the social context of doctoral programs increase. These findings highlight the importance of intrinsic motivation and autonomy-supportive faculty to frequency of doctoral student scholarly activity. Intrinsic motivation is associated with increased academic performance and persistence, hence increasing extent of scholarly activity, rather than extrinsic motivation which is linked to decreased academic performance and external control (Baker, 2004).

The second hierarchical regression analysis rejected the second null hypothesis that there was no relationship between the perceived importance of scholarly activity and length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context of doctoral programs. These predictors failed to provide significant independent contributions, although the four predictors combined including length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context produced a significant equation. Social context of doctoral programs was the strongest, significant contributor to the prediction model. The combined predictors of length of time in doctoral program, intrinsic and extrinsic goal aspirations, and social context of doctoral programs can significantly predict the perceived importance of scholarly activity. The results confirmed
the hypothesis that as social context of doctoral programs increased, importance of scholarly activity increased. These findings highlight the critical nature of faculty to provide autonomy-supportive climates to doctoral students that places importance on scholarly activity during doctoral study. Faculty intentional about balancing support and challenge, providing feedback, assessing scholarly development, and promoting doctoral student self-sufficiency may increase importance of scholarly activity. In addition, increasing importance through autonomy-supportive social contexts may increase the frequency of scholarship in doctoral programs. The concept of autonomy-support means faculty assumes doctoral students perspectives, acknowledges feelings, and challenge students to think critically, while minimizing the use of pressure and demands (Black & Deci, 2000). This maintains intrinsic motivation, enhances autonomy, and increases importance and academic persistence. A central hypothesis of self-determination theory is that social contexts that facilitate motivation, performance, and development and provide autonomy-supportive climates will promote intentional action to succeed that is self-determined (Deci, Vallerand, Pelletier, & Ryan, 1991).

Discussion of the Supplemental Analysis

The supplemental analyses provided further results from the study. A correlation between frequency of scholarly activity and length of time in doctoral program was found to be statistically significant ($r = -.30, p < .01$). The findings indicated that as frequency of scholarly activity increased, length of time in doctoral program decreased, indicating a significant relationship. A relationship was expected since the frequency of scholarly activity variables used length of time in doctoral program as part of the measurement, although the direction of the relationship was unexpected. The survey was internally
consistent and reliable. Based on these results, there may have been non-traditional
doctoral students that have an established record of scholarship prior to returning for a
doctoral degree.

A second correlational analysis found that intrinsic goal aspirations were
significantly ($r = .20, p < .05$) related to the perceived importance of scholarly activity.
Doctoral students who are intrinsically motivated to succeed may perceive scholarly
activity to be important to their roles as a student and as emerging faculty. Intrinsically
motivated students engage in behaviors of interest and importance which is maximized in
autonomy-supportive social contexts (Deci & Ryan, 2000). Additionally, the correlational
analysis found that intrinsic goal aspirations was significantly ($r = .39, p < .01$) related to
the social context of doctoral programs. Research has found that autonomy-supportive
classrooms were associated with intrinsic motivation and increased performance (Black

Finally, an independent sample $t$ test found significant differences for the
frequency of scholarly activity ($t = 2.36, df = 100, p < .05$) with doctoral students in
CACREP accredited programs ($mean = 10.46, SD = 8.95$) and non-CACREP accredited
programs ($mean = 5.35, SD = 7.57$). Doctoral students in CACREP accredited programs
are expected to perform at a level consistent with the 2001 CACREP standards as
minimal criteria for the preparation of counselor educators as scholars in the profession.
Advantages of CACREP program accreditation for doctoral students include (a) assuring
students that the program meets high professional standards indicating degree of
expectation, (b) offering graduates advantages related to having been a student in a
program that meets and maintains high standards, and (c) provides a sense of
accomplishment and gratification that may be a motivating factor to engage in
scholarship (Clawson, Henderson, Schweiger, & Collins, 2004). The results indicate that
doctoral students in CACREP accredited programs engage in more scholarly activity than
those in non-CACREP accredited programs.

An independent sample t test found significant differences between counselor
education doctoral students in CACREP and non-CACREP accredited programs and
social context (t = 2.67, df = 47.22, p <.05) with non-CACREP (mean = 85.55, SD =
11.57) having a higher mean. Counselor education doctoral students in non-CACREP
accredited programs may perceive their faculty as providing autonomy-supportive
climates with less demanding expectations of scholarly activity. Social contexts that
promote student choice but are less intentional regarding scholarly productivity may be
perceived as less pressuring or demanding. CACREP accredited programs meet high
standards (Clawson et al., 2004). It seems that similar standards are expected of doctoral
students in CACREP accredited programs. The social contexts of CACREP accredited
programs may be perceived as less autonomy-supportive based on higher expectations for
scholarship, resulting in a seemingly more demanding scholarly environment.

Implications of Findings

The results of this study have implications for counselor education doctoral
students, counselor educators, and counselor education. This study validates the position,
according to self-determination theory, that autonomy-supportive contexts tend to
maintain or enhance intrinsic motivation which may facilitate performance, persistence,
and development (Black & Deci, 2000; Ryan & Deci, 2000; Vansteenkiste, Simons,
Lens, Sheldon, & Deci, 2004). While the current literature on scholarship (Boyer, 1990;
Glassick, Huber, & Maeroff, 1997), length of time in doctoral program (Kahn & Scott, 1997); doctoral program standards (Zimpfer, Cox, West, Bubenzer, & Brooks, 1997), intrinsic and extrinsic motivation and social context (Deci & Ryan, 1985; Deci & Ryan, 2000; Ryan & Deci, 2000) is abundant, there was minimal research on doctoral scholarly activity, length of time in doctoral program, goal aspirations, and social context of doctoral programs. Implications of the frequency results for counselor education doctoral students include the importance of being intentional the regarding extent of engagement in scholarly activity while in doctoral study. Intrinsically motivated doctoral students should maintain and develop their self-determination to seek out challenges, extend their potential, and explore scholarly pursuits to develop as a scholar. Doctoral students should be intentional about taking initiative to collaborate with faculty actively involved in scholarship with common research interests to pursue scholarly activity. This provides preparation in competencies needed for scholarship that may be expected of faculty (Austin, 2002). Experiences in scholarly activity as doctoral students provide preparation for scholarship required of tenure-track faculty and for success as a scholar. Additionally, increasing involvement in scholarly activity is an essential mechanism for development as a scholar while a doctoral student and to increase competitiveness for faculty positions. Finally, contributing to research and involvement in scholarly activity as a doctoral student may enhance the profession and move it forward, and accumulate a research base of doctoral student scholars.

A goal of counselor education programs should be to increase the scholarly activity of their doctoral students based on the results of the frequency of scholarship. It may be beneficial for faculty to understand the factors that influence doctoral student
involvement in scholarship and provide autonomy-supportive contexts within programs to facilitate intrinsic motivation. Doctoral students' graduate experiences are influenced by the specific departmental context (Austin, 2002). Implications of the results for counselor education programs include integrating scholarship into doctoral study, regardless of length of time in program, doctoral students are introduced to and advised on scholarly activity from the beginning to the end of their doctoral programs. Counselor education faculty should conduct a periodic assessment within dimensions of scholarship for review with the doctoral students on progress and areas of improvement. This would provide specific feedback to doctoral students that may enhance skill and development while increasing intrinsic motivation for scholarly activity. Focused feedback that addresses expectations and intentionally concerns progress on dimensions of scholarly work is apparently less frequent (Austin, 2002; Nyquist, Austin, Sprague, & Wulff, 2001).

Counselor educators have recognized the importance of scholarship to doctoral student development (CACREP, 2001; Zimpfer, Mohdzain, West, & Bubenzer, 1992). Findings of the study indicate that as perceived social context increased, importance of scholarly activity increased. Counselor educators need to be aware of the critical implications of creating autonomy-supportive contexts within their doctoral programs for scholarship that provide a scientific yet social view of scholarship that may be seen as collaborative and fun. Additional academic experiences that may be beneficial to offer include research seminars and informal research teams to discuss research, develop research ideas, plan collaborative research studies, discuss dissertation topics and process, and write proposals and convention presentations. Additionally, offering
trainings on tips for manuscript and grant writing, as well as on innovative teaching, and leadership workshops. It may be beneficial for counselor education curriculum to focus more intently on efforts to increase student scholarly activity.

The importance of faculty research and scholarly productivity is essential to the frequency and importance of scholarly activity and the social context of the doctoral program. Doctoral student scholarship may occur more frequency and effectively when the faculty advisor is active in scholarship (Betz, 1997). Doctoral students who enter programs that find a professor interested in their areas of research, has knowledge of applied research, and is interested in collaborating on research may promote importance and interest. Faculty mentoring may increase the frequency and perceived importance of scholarly activity as doctoral students. In most doctoral programs, faculty are expected to research and publish as well as achieve in other scholarly areas, at least until they receive tenure (Bowman, 1997). This is another means of increasing doctoral student scholarly activity.

The supplemental analyses have implications for doctoral students, counselor educators, and counselor education. A supplemental analysis found that intrinsic aspirations were positively related to importance of scholarly activity and social context. Doctoral students should be aware of the importance of scholarly activity to their development as a doctoral student and emerging counselor educator. In addition, doctoral students should capitalize on collaborating with faculty on scholarly pursuits. Counselor educators should be aware of the essential nature of autonomy-supportive social contexts in their doctoral programs. The result of autonomy-supportive contexts facilitates intrinsic aspirations and increases importance of scholarly activity. Counselor educators
can infuse the importance of scholarly activity into lectures and trainings, and be active in scholarship as faculty. Findings of significant relationships in studies between perceptions of the research training program and both research interests and research self-efficacy are consistent with recent theory (Betz, 1993; Betz, Bogen, & Harmon, 1996) regarding the importance of positive experiences and opportunities to the development of both interests and scholarly self-efficacy in doctoral students.

A supplemental analysis revealed that counselor education doctoral students in CACREP accredited programs had a higher frequency of scholarly activity than those in non-CACREP accredited programs. CACREP accredited doctoral programs are required to meet minimum criteria in doctoral preparation transforming doctoral students into scholars. This may indicate higher expectations supporting the findings of this analysis. Counselor educators should be aware that CACREP accredited programs may be focusing more on scholarship at the doctoral level based on the high standards of these programs.

A supplemental analysis found that doctoral students from non-CACREP accredited programs had a higher perceived social context score indicating high autonomy-supportive faculty. Counselor educators should note that autonomy-supportive contexts promote intrinsic motivation, increased performance, and persistence (Deci & Ryan, 2000). Autonomy-support may increase the frequency of scholarly activity as well as the perceived importance. The results may also indicate that based on the results of CACREP doctoral student having a higher indication of frequency of scholarly activity, doctoral students in non-CACREP accredited programs may perceive the social contexts of their doctoral programs as autonomy-supportive based on less demands for
scholarship. Non-CACREP accredited programs may not have high scholarly expectations since these programs are not required to meet CACREP academic standards for excellence. Counselor educators should be intentional about focusing their efforts on increasing the frequency and importance of scholarly activity of doctoral students in CACREP and non-CACREP accredited programs, while creating or maintaining social contexts within doctoral programs that promote autonomy and intrinsic motivation resulting in increased performance, development, and persistence for scholarly pursuits.

Limitations of the Study

The conclusions of this study were restricted by the limitations. Areas of limitations must be considered when drawing conclusions from this study. First, the measures were based on student self-report. The measure of frequency of scholarly activity consisted of items that required an objective response but relied on potentially fallible doctoral student participant reports. Perceptions of importance of scholarly activity, goal aspirations, and social context may appear quite different if reported by faculty members or doctoral student advisors. Secondly, the validity of the study may have been compromised by the less than optimal response rate. This researcher attempted to increase response rate using a convenience sample that was not viable based on end of semesters of doctoral programs. The design of the study was ex post facto which prevents attributing causation to the variables. Replicating this study with a large random sample of doctoral students may lend additional support to the study.
Directions for Future Research

The study focused on counselor education doctoral student scholarly activity, goal aspirations, and social context of doctoral programs. Future studies may benefit from broadening the scope of this study based on the null hypotheses and supplemental analysis. Widening the scope of this study may be achieved by focusing on faculty perceptions of counselor education doctoral students scholarly activity, intrinsic and extrinsic motivation, as well as faculty perception of the social context of their doctoral programs. Future studies could be more generalizable by obtaining a higher response rate.

There are various recommendations for future research based upon the findings of the research. To gain an understanding of factors critical to influencing doctoral student engagement in scholarship, it is essential to understand the perceptions of students in counselor preparation programs. Future studies could broaden the research by adding variables beyond length of time in program, intrinsic and extrinsic goal aspirations, and social context. The variables may include anxiety, research self-efficacy, research outcome expectations, postdoctoral career goals, mentoring, faculty scholarly productivity, and doctoral students interest in scholarship. Researchers could investigate specific areas of scholarship such as research and intrinsic motivation of doctoral students. Additionally, future studies could survey doctoral students who do not have graduate assistanceships. These students may be more involved in scholarly activity based on their GA position and have implications for scholarly motivation. Future research based upon the findings could qualitatively examine scholarship, motivation, and social context in CACREP and non-CACREP accredited programs.
Finally, faculty reports of these variables may have added to the construct validity of the measure. Additionally, the perceptions of faculty regarding scholarship and social context of their doctoral programs would contribute to the literature and provide an exploration of the factors that influence doctoral student involvement in scholarship.

Conclusion

This study explored the relationship between the frequency and perceived importance of scholarly activity and length of time in doctoral program, intrinsic and extrinsic goal aspirations, and the social context of doctoral programs. The results of this study provided additional literature on doctoral student scholarship, goal aspirations, and social contexts. Additionally, findings support the perspective that scholarship was related to length of time in program, and social contexts of doctoral programs. The findings demonstrated a statistically significant relationship between the frequency of scholarly activity and length of time in doctoral program and importance of scholarly activity and social context of doctoral programs. Significant findings were discovered among intrinsic goal aspirations, importance of scholarly activity, frequency of scholarly activity, and social contexts of doctoral programs. These findings contribute to the literature supporting doctoral student scholarship, intrinsic goals, length of time in doctoral program, and autonomy-supportive social contexts of doctoral programs.
References


redefined in counselor education. *Counselor Education and Supervision, 42, 40-57.*


**Supervision**, 38(3), 177-191.


Appendix A

Correspondence from the Institutional Review Board
A determination has been made that the following research study is exempt from IRB review because it involves

Category 2: research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: An Analysis of the Relationship between the Scholastic Activity of Counselor Education Doctoral Students and Intrinsic Versus Extrinsic Goal Aspirations

Project Director: Holly H. Miller

Department: Counseling and Higher Education

Advisor: Tom F. Davis

Rebecca Gale, Associate Director, Research Compliance
Institutional Review Board

Date: 2/14/06

The appropriate institutional review board must be consulted to address study design, implementation, and dissemination of results.
The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University. Approval date of this amendment does not affect the expiration date of the original approval.

Amendment: Add Convenience Sample to Data Collection

Project: An Analysis of the Relationship between the Scholarly Activity of Counselor Education Doctoral Students and Intrinsic Versus Extrinsic Goal Aspirations

Project Director: Holly H. Miller

Advisor: Tom E. Davis
Department: Counseling and Higher Education

Rebecca G. Cale
Institutional Review Board
05/08/06 Date
Appendix B

Permission to Use the Instruments
Holly Miller

From: Richard Ryan <ryan@psych.rochester.edu>
To: Holly Miller <hmiiller@umn.edu>
Sent: Saturday, September 24, 2005 8:59 AM
Subject: Re: Aspiration Index (Revised)

Holly—
you have permission to use any measures we have posted on the web for research use, including the aspirations index. Please keep us posted with results of your research and good luck.

Richard

Hi Dr. Ryan

I am a doctoral student conducting my dissertation research on scholarly productivity. I am interested in self-determination theory and involving doctoral students but not mandating it. My goal is to relate the extent of their scholarship while in doctoral training. I am aware that the index is online but I wanted your permission to use the aspirations index in my dissertation research. I really appreciate your time.

Thank you,

Holly Miller

Ohio University, Doctoral Student

Richard M. Ryan
Professor of Psychology, Psychiatry, and Education
Melissa Hall-CSP
University of Rochester
Rochester, NY 14627
315-753-8708

website for SDT:
http://www.selfdeterminationtheory.org
website for Motivation and Emotion
http://sdemotempr.com

12/13/2006
From: "Ed DeC" <dec@psych.rochester.edu>
To: "Holly Miller" <hlemiller@greenapple.com>
Sent: Tuesday, December 13, 2005 12:40 PM
Subject: Re: Perceived Authority Support

You are welcome to use the Perceived Authority Support Learning Climate Questionnaire for your research. Good luck with your project.

Edward L. Dec
Professor of Psychology and
Counselor Professor in the Social Sciences
University of Rochester
Box 270266
Rochester, NY 14627
Phone: (585) 275-2461
Fax: (585) 272-1160
e-mail: dec@psych.rochester.edu
website: http://psyche.rochester.edu/EDC

On Tue, 13 Dec 2005, Holly Miller wrote:

> Hi Dr. Dec,
> 
> I asked permission to use the Aspirations Index for my dissertation on
> scholarly activity of doctoral students and motivation. I am now asking
> for your permission to use the Perceived Authority Support Learning
> Climate Questionnaire. I intend to use it as part of my dissertation
> research exploring the social context in which doctoral students are
> immersed and the role of the context in fostering intrinsic versus
> extrinsic motivation.
> 
> Thank you
> 
> Holly Miller, M.Ed., Ph.D.
> Doctoral Student
> Ohio University
Re: Scholarly Activity Survey

Subject: Re: Scholarly Activity Survey
From: Holly Miller <hollymiller@greenapple.com>
Date: Wed, 21 Sep 2005 16:47:44 -0400
To: Ramsey <ramsey@cnj.edu>

Dr. Ramsey,

Thank you for locating a copy. If I use this, I will cite you appropriately, as well, as I have your permission to adjust as needed to fit my research.

My email: Holly Miller
300 Mass Ave
Baltimore, MD 21202

I really appreciate your time.

Holly Miller
Ohio University Doctoral Student

----- Original Message ----- From: 'Ramsey' <ramsey@cnj.edu>
To: 'Holly Miller' <hollymiller@greenapple.com>
Date: Wednesday, September 21, 2005 4:01 AM
Subject: Re: Scholarly Activity Survey

Dear Holly,

I have located a copy of our survey form. Please send me your email address as you can be included in your survey.

Thanks.

Nancy Ramsey

Holly Miller writes:

Hi Dr. Ramsey,

I am conducting my dissertation research on doctoral student and assistant professor faculty and the relationship between scholarly achievement and achievement motivation. I have been constructing a survey on scholarship based on Meyer (1990) and found your article: scholarly productivity Redefined in Counseling Education. I was interested in obtaining a copy of the survey you constructed to use for your research. It may be similar to the one that I have put together. I would appreciate any information you have to share on the topic. I find it very interesting for doctoral students and faculty alike to be able to compare their scholarly records with colleagues. I plan to survey CACREP and non-CACREP accredited programs to be more generalizable.

Thank you for your time.

Holly Miller
Ohio University Doctoral Student
Appendix C

Histogram and Residual plots of Hierarchical Regression Analysis
FIGURE 3

*Histogram for items on the Frequency of Scholarly Activity Scale*
FIGURE 4

Scatterplot for Frequency of Scholarly Activity Scale
FIGURE 5

Histogram for Items on the Importance of Scholarly Activity Scale
FIGURE 6

Scatterplot for Importance of Scholarly Activity Scale
Appendix D

Supplemental Correlations
TABLE 8

Correlations Among the Predictor Variables for Frequency of Scholarly Activity Scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Frequency</td>
<td>___</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Length of Time</td>
<td>- .30*</td>
<td>___</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Intrinsic</td>
<td>.04</td>
<td>.04</td>
<td>___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Extrinsic</td>
<td>.08</td>
<td>-.05</td>
<td>.17</td>
<td>___</td>
<td></td>
</tr>
<tr>
<td>5. Social Context</td>
<td>.01</td>
<td>.05</td>
<td>.40</td>
<td>-.03</td>
<td>___</td>
</tr>
</tbody>
</table>

Note: Frequency Scale = Doctoral Student Scholarly Activity Scale; Length of Time in Program = Length of Time in Doctoral Program; Intrinsic Scale = Aspirations Index; Extrinsic Scale = Aspirations Index; Social Context = Perceived Autonomy Support: Learning Climate Questionnaire.

*p < .01
TABLE 9

*Correlations Among the Predictor Variables for Importance of Scholarly Activity Scale*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Importance</td>
<td>___</td>
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<tr>
<td>Length of Time</td>
<td>-.12</td>
<td>___</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic</td>
<td>.20*</td>
<td>.03</td>
<td>___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic</td>
<td>.17</td>
<td>-.04</td>
<td>.17</td>
<td>___</td>
<td></td>
</tr>
<tr>
<td>Social Context</td>
<td>.23</td>
<td>.04</td>
<td>.39*</td>
<td>-.03</td>
<td>___</td>
</tr>
</tbody>
</table>

*Note:* Importance Scale = Doctoral Student Scholarly Activity Survey; Length of Time in Program = Length of Time in Doctoral Program; Intrinsic Scale = Aspirations Index; Extrinsic Scale = Aspirations Index; Social Context = Perceived Autonomy Support: Learning Climate Questionnaire.

*p < .01; *p < .05
Appendix E

Supplemental t Test
TABLE 10

Means and Standard Deviations of Two Groups for t test: CACREP Accredited Programs and Non CACREP Accredited Programs

<table>
<thead>
<tr>
<th></th>
<th>CACREP Programs</th>
<th>Non CACREP Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Scholarly Activity Survey</td>
<td>83</td>
<td>10.46</td>
</tr>
<tr>
<td>Importance of Scholarly Activity Survey</td>
<td>83</td>
<td>29.41</td>
</tr>
<tr>
<td>Intrinsic Scale</td>
<td>83</td>
<td>6.11</td>
</tr>
<tr>
<td>Extrinsic Scale</td>
<td>83</td>
<td>3.12</td>
</tr>
<tr>
<td>Social Context</td>
<td>83</td>
<td>76.67</td>
</tr>
</tbody>
</table>
Appendix F

Letter of Introduction and Informed Consent Form and Survey Instrument
Doctoral Student Scholarly Activity Survey

1. Informed Consent

February 14, 2006

Dear Colleagues,

My name is Holly Miller. I am a doctoral student at Ohio University. I am working with Dr. Tom Davis to determine the scholarly activity of doctoral students in counselor education. In addition, we would like to explore the potential relationship between scholarly activity and intrinsic versus extrinsic goal pursuits and social context of doctoral programs. Counselor education doctoral students are the focus of this research. I am writing to ask for your assistance and participation in a dissertation research.

The following is the Doctoral Student Scholarly Activity Survey. The survey will take approximately 20 minutes to complete. Your participation in this study is entirely voluntary and you must be 18 years of age or older in order to participate. You may decline participation by simply not filling out this survey, and you may discontinue your participation at any time. Data from completed surveys will be given anonymous ID. All data will be analyzed using group statistics and no demographic information will be used to reveal the identity of any participants.

If you have any questions about this research project, please feel free to contact Holly Miller at 740-862-8735. Assistance in this project is greatly appreciated. Thank you for your time and your willingness to consider taking the survey.

Sincerely,

Holly H. Miller, M.Ed., Ph.D.
Doctoral Student

Tom Davis, Ph.D., PCC, Dean
Dissertation Director

Next >>
Doctoral Student Scholarly Activity Survey

2. Frequency of Scholarly Activity

Scholarly Activity Pertaining to Teaching: Indicate the extent to which you have engaged in each of the following scholarly activities related to teaching as a doctoral student.

1. Indicate the number of graduate level courses taught as a doctoral student.

2. Indicate the number of graduate level courses co-taught as a doctoral student.

3. Indicate the number of graduate level courses designed and implemented as a doctoral student.

4. Indicate the number of graduate level courses co-designed and implemented as a doctoral student.

5. Indicate the number of practicum courses taught as a doctoral student.

6. Indicate the number of internship courses taught as a doctoral student.

<< Prev       Next >>
Doctoral Student Scholarly Activity Survey

3. Frequency of Scholarly Activity

Scholarly Activity Pertaining to Research: Indicate the extent to which you have engaged in each of the following scholarly activities pertaining to research as a doctoral student.

7. Indicate the number of non-referred publications in which you were the lead author as a doctoral student.

8. Indicate the number of non-referred publications co-authored as a doctoral student.

9. Indicate the number of referred journal publications in which you were lead author as a doctoral student.

10. Indicate the number of co-authored publications in a referred journal as a doctoral student.

11. Indicate the number of proposals submitted for a professional presentation to a national conference as a doctoral student.

12. Indicate the number of proposals submitted for a professional presentation to your state/regional conference as a doctoral student.

13. Indicate the number of lead presentations conducted at a national conference as a doctoral student.

14. Indicate the number of co-presentations conducted at a national conference as a doctoral student.

15. Indicate the number of lead presentations conducted at your state conference as a doctoral student.

16. Indicate the number of co-presentations conducted at your state conference as a doctoral student.

17. Indicate the number of grants (funded) authored as a doctoral student.
18. Indicate the number of grants (non-funded) authored as a doctoral student.
Doctoral Student Scholarly Activity Survey

4. Frequency of Scholarly Activity

Scholarly Activity Pertaining to Service: Indicate the extent to which you have engaged in each of the following scholarly activities pertaining to service as a doctoral student.

19. Indicate the number of leadership positions held in the counseling profession as a doctoral student.

20. Indicate the number of professional counseling association committees you have served on as a doctoral student.

21. Indicate the number of leadership positions held in Chi Sigma Iota as a doctoral student.

22. Indicate the number of times you have been a student representative of an association.

<< Prev       Next >>
Doctoral Student Scholarly Activity Survey

5. Importance of Scholarly Activity

Please rate the relative importance of the following scholarly activities to excelling as a doctoral student in your counselor education program. Check the box corresponding to the appropriate point on the five-point scale ranging from (4) Extremely Important, (3) Moderately Important, (2) Somewhat Important, (1) Minimally Important, (0) Not at All Important.

23. Publications in refereed journals

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

24. Non-refereed publications

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

25. Lead presenter of national, regional, and state conference presentations

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
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<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

26. Co-presenter of national, regional, and state conference presentations

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

27. Lead author of other written works (newsletters, grants, training manuals)

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

28. Co-author of other written materials (grants, training manuals)

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
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<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
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</tbody>
</table>

29. Scholarly work pertaining to teaching (excellence in teaching, course development)

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
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<tr>
<td>3 Moderately Important</td>
<td>[ ]</td>
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<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
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<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
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</tbody>
</table>

30. Student evaluations and feedback

<table>
<thead>
<tr>
<th>Importance</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Extremely Important</td>
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<tr>
<td>3 Moderately Important</td>
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<tr>
<td>2 Somewhat Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>1 Minimally Important</td>
<td>[ ]</td>
</tr>
<tr>
<td>0 Not at All Important</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
31. Scholarly activity pertaining to service (leadership roles in professional associations)

4 Extremely Important
3 Moderately Important
2 Somewhat Important
1 Minimally Important
0 Not at All Important

32. Other professional activities (conducting seminars, consultations)

4 Extremely Important
3 Moderately Important
2 Somewhat Important
1 Minimally Important
0 Not at All Important

<< Prev       Next >>
### Doctoral Student Scholarly Activity Survey

6. Aspirations Index

Every individual has long-term goals or aspirations that they hope to accomplish over the course of their lives. In this section, there are a number of life goals, presented one at a time, that ask three questions pertaining to each goal: (a) How important is this goal to you? (b) How likely is it that you will attain this goal in your future? and (c) How much have you already achieved this goal thus far? Please use the following scale in answering each of the three questions about each life goal. Indicate the number corresponding to the appropriate point on the 7-point scale ranging from (1) Not at all to (4) Moderately to (7) Very:

33. Life-goal: To be a very wealthy person.

<table>
<thead>
<tr>
<th>1. How important is this to you?</th>
<th>2</th>
<th>3</th>
<th>4 Moderately</th>
<th>5</th>
<th>6</th>
<th>7 Very</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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</tbody>
</table>

34. Life-goal: To grow and learn new things.

<table>
<thead>
<tr>
<th>2. How likely is it that this will happen in your future?</th>
<th>3</th>
<th>4 Moderately</th>
<th>5</th>
<th>6</th>
<th>7 Very</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tbody>
</table>

35. Life-goal: To have my name known by many people.

<table>
<thead>
<tr>
<th>3. How much have you already attained this goal?</th>
<th>4 Moderately</th>
<th>5</th>
<th>6</th>
<th>7 Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

36. Life-goal: To have good friends that I can count on.

<table>
<thead>
<tr>
<th>4. How important is this to you?</th>
<th>5</th>
<th>6</th>
<th>7 Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

37. Life-goal: To successfully hide the signs of aging.

<table>
<thead>
<tr>
<th>5. How likely is it that this will happen in your future?</th>
<th>6</th>
<th>7 Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Rating</td>
<td>1</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>---</td>
</tr>
<tr>
<td>13. How important is this to you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. How likely is it that this will happen in your future?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. How much have you already attained this goal?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>38. Life-goal: To work for the betterment of society.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. How important is this to you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. How likely is it that this will happen in your future?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. How much have you already attained this goal?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>39. Life-goal: To have many expensive possessions.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. How important is this to you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. How likely is it that this will happen in your future?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. How much have you already attained this goal?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>40. Life-goal: At the end of my life, to be able to look back on my life as meaningful and complete.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. How important is this to you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. How likely is it that this will happen in your future?</td>
<td></td>
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<td>24. How much have you already attained this goal?</td>
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<td><strong>41. Life-goal: To be admired by many people.</strong></td>
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<td>25. How important is this to you?</td>
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<td>26. How likely is it that this will happen in your future?</td>
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<td>27. How much have you already attained this goal?</td>
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<td><strong>42. Life-goal: To share my life with someone I love.</strong></td>
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<td>28. How important is this to you?</td>
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<td>29. How likely is it that this will happen in your future?</td>
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<td>30. How much have you already attained this goal?</td>
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<td>31. How well do you believe you have attained this goal?</td>
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<td>32. How likely is it that you will continue to reach your goal?</td>
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<td>33. How much have you already attained this goal?</td>
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<td>34. How much do you believe you will continue to reach your goal?</td>
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<td>35. How much have you already attained this goal?</td>
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<td><strong>43. Life-goal: To travel to many interesting places.</strong></td>
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<td>36. How important is this to you?</td>
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<td>37. How likely is it that this will happen in your future?</td>
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<td>38. How much have you already attained this goal?</td>
<td></td>
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</tbody>
</table>
29. How likely is it that this will happen in your future?

30. How much have you already attained this goal?
## Doctoral Student Scholarly Activity Survey
### 7. Aspirations Survey

#### 43. Life-goal: To have people comment often about how attractive I look.

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 Moderately</th>
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<th>6</th>
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<tr>
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<td><img src="image4" alt="Rating" /></td>
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<td><img src="image6" alt="Rating" /></td>
<td><img src="image7" alt="Rating" /></td>
</tr>
</tbody>
</table>

- How important is this to you?
- How likely is it that this will happen in your future?
- How much have you already attained this goal?

#### 44. Life-goal: To assist people who need it, asking nothing in return.

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 Moderately</th>
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<td><img src="image13" alt="Rating" /></td>
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</tr>
</tbody>
</table>

- How important is this to you?
- How likely is it that this will happen in your future?
- How much have you already attained this goal?

#### 45. Life-goal: To be financially successful.

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 Moderately</th>
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<td><img src="image18" alt="Rating" /></td>
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<td><img src="image20" alt="Rating" /></td>
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</tr>
</tbody>
</table>

- How important is this to you?
- How likely is it that this will happen in your future?
- How much is this satisfied currently?

#### 46. Life-goal: To choose what I do, instead of being pushed along by life.

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 Moderately</th>
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<td><img src="image27" alt="Rating" /></td>
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</tbody>
</table>

- How important is this to you?
- How likely is it that this will happen in your future?
- How much is this satisfied currently?

#### 47. Life-goal: To be famous.

<table>
<thead>
<tr>
<th>1 Not at all</th>
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<th>3</th>
<th>4 Moderately</th>
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</tbody>
</table>

- How important is this to you?
- How likely is it that this will happen in your future?
- How much have you already attained this goal?
48. Life-goal: To have committed, intimate relationships.

<table>
<thead>
<tr>
<th></th>
<th>1 Not at all</th>
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<th>4 Moderately</th>
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<td>46. How important is this to you?</td>
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<td>47. How likely is it that this will happen in your future?</td>
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<td>48. How much have you already attained this goal?</td>
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49. Life-goal: To keep up with fashions in hair and clothing.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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<td>49. How important is this to you?</td>
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<td>50. How likely is it that this will happen in your future?</td>
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<td>51. How much have you already attained this goal?</td>
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50. Life-goal: To work to make the world a better place.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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<tr>
<td>52. How important is this to you?</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
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<td>53. How likely is it that this will happen in your future?</td>
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<td>54. How much have you already attained this goal?</td>
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51. Life-goal: To be rich.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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<td>55. How important is this to you?</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
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<td>56. How likely is it that this will happen in your future?</td>
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<td>57. How much have you already attained this goal?</td>
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52. Life-goal: To know and accept who I really am.

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<td>58. How important is this to you?</td>
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<td>59. How likely is it that this will happen in your future?</td>
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<td>60. How much have you already attained this goal?</td>
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Doctoral Student Scholarly Activity Survey

8. Aspirations Survey

53. Life-goal: To have my name appear frequently in the media.

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<th>4 Moderately</th>
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61. How important is this to you?
62. How likely is it that this will happen in your future?
63. How much have you already attained this goal?

54. Life-goal: To feel that there are people who really love me, and whom I love.

<table>
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<th>1 Not at all</th>
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<th>4 Moderately</th>
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64. How important is this to you?
65. How likely is it that this will happen in your future?
66. How much have you already attained this goal?

55. Life-goal: To achieve the "look" I've been after.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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67. How important is this to you?
68. How likely is it that this will happen in your future?
69. How much have you already attained this goal?

56. Life-goal: To help others improve their lives.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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70. How important is this to you?
71. How likely is it that this will happen in your future?
72. How much have you already attained this goal?

57. Life-goal: To have enough money to buy everything I want.

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<tr>
<th>1 Not at all</th>
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<th>4 Moderately</th>
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73. How important is this to you?
74. How likely is it that this will happen in your future?
75. How much have you already attained this goal?
58. Life-goal: To gain increasing insight into why I do the things I do.

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<th>4 Moderately</th>
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59. Life-goal: To be admired by lots of different people.

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<th>1 Not at all</th>
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<th>3</th>
<th>4 Moderately</th>
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<th>7 Very</th>
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60. Life-goal: To have deep enduring relationships.

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<th>1 Not at all</th>
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<th>4 Moderately</th>
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<td>82. How important is this to you?</td>
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61. Life-goal: To have an image that others find appealing.

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<th>4 Moderately</th>
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62. Life-goal: To help people in need.

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<tr>
<th></th>
<th>1 Not at all</th>
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<< Prev     Next >>
9. Perceived Autonomy Support: Learning Climate Questionnaire

This questionnaire contains items that are related to your experience with faculty in your program as a doctoral student. Check the box corresponding to the appropriate point on the seven-point likert scale ranging from (1) Strongly Disagree to (7) Strongly Agree.

63. I feel that the faculty provide me with choices and options.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4 Neutral</th>
<th>5</th>
<th>6</th>
<th>7 Strongly Agree</th>
</tr>
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</table>

64. I feel understood by the faculty.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4 Neutral</th>
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<th>6</th>
<th>7 Strongly Agree</th>
</tr>
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65. I am able to be open with the faculty.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
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<th>4 Neutral</th>
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<th>6</th>
<th>7 Strongly Agree</th>
</tr>
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</table>

66. The faculty conveyed confidence in my ability to do well in the doctoral program.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
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<th>3</th>
<th>4 Neutral</th>
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<th>6</th>
<th>7 Strongly Agree</th>
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67. I feel the faculty accepts me.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
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<th>4 Neutral</th>
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<th>7 Strongly Agree</th>
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68. The faculty made sure I really understood the goals of the doctoral program and what I need to do.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
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<th>3</th>
<th>4 Neutral</th>
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<th>6</th>
<th>7 Strongly Agree</th>
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69. The faculty encouraged me to ask questions.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
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<th>4 Neutral</th>
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<th>6</th>
<th>7 Strongly Agree</th>
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70. I feel a lot of trust in the faculty.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
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<th>4 Neutral</th>
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<th>7 Strongly Agree</th>
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</table>
71. The faculty answers my questions fully and carefully.

<table>
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<th>1 Strongly Disagree</th>
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<th>4 Neutral</th>
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<th>7 Strongly Agree</th>
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72. The faculty listens to how I would like to do things.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
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<th>4 Neutral</th>
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<th>7 Strongly Agree</th>
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73. The faculty handles people's emotions very well.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4 Neutral</th>
<th>5</th>
<th>6</th>
<th>7 Strongly Agree</th>
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74. I feel that the faculty cares about me as a person.

<table>
<thead>
<tr>
<th>1 Strongly Disagree</th>
<th>2</th>
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75. I don't feel very good about the way the faculty talks to me.

<table>
<thead>
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<th>5</th>
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76. The faculty tries to understand how I see things before suggesting a new way to do things.

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<thead>
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77. I feel able to share my feelings with the faculty.

<table>
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<< Prev        Next >>
Doctoral Student Scholarly Activity Survey

10. Demographic Information

Please answer in the manner that best indicates you currently.

78. What is your age?

79. What is your gender?
- [ ] Male
- [ ] Female

80. What is your race?
- [ ] American Indian and Alaska Native
- [ ] Asian
- [ ] Black or African American
- [ ] Hispanic/Latino origin
- [ ] White or Caucasian
- [ ] Other

81. Indicate the number of semesters OR quarters you have completed as a doctoral student.

- Semesters
- Quarters

82. Indicate the license(s)/certification(s) you currently hold.
- [ ] Licensed Counselor
- [ ] Independently Licensed Counselor
- [ ] Certified Counselor
- [ ] School Counselor
- [ ] No License/Certification

83. Indicate your doctoral program accreditation status.
- [ ] CACREP accredited
- [ ] Non CACREP accredited

84. Indicate the professional organization(s) that enhance your scholarly activity in teaching, research, and service.

- National
- Regional
- State

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Thank you for completing this survey.