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Perceived Stress and Self-efficacy as Correlates of Satisfaction With the Dissertation Process Among Doctoral Students in Educational Psychology in Selected Universities in the United States

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ABSTRACT

PERCEIVED STRESS AND SELF-EFFICACY AS CORRELATES OF
SATISFACTION WITH THE DISSERTATION PROCESS AMONG
DOCTORAL STUDENTS IN EDUCATIONAL PSYCHOLOGY
IN SELECTED UNIVERSITIES IN THE UNITED STATES

by

Gabriela A. Dumitrescu

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

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Title: PERCEIVED STRESS AND SELF-EFFICACY AS CORRELATES OF
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Purpose of the Study

The purpose of this study is to investigate the role of perceived stress and self-efficacy on student satisfaction with the dissertation process among doctoral students in educational psychology in selected universities in the United States.

Method

Survey research method was used as the research platform for this study. Online surveys using Survey Monkey were administered to doctoral student in Educational Psychology from selected universities in the United States. Dissertation self-efficacy was measured with the Dissertation Self-Efficacy Scale (DSES; Varney, 2003). Perceived Stress was measured with the Perceived Stress Scale-10 (PSS-10; Cohen, Kamarch &

Mermelstein, 1983). Student Satisfaction was measured by a single, straight forward question on how satisfied doctoral candidates and recent graduates were with the dissertation process. Descriptive statistics analysis was performed by frequency, mean and standard deviation to find out how satisfied were doctoral students in educational psychology with the dissertation process. Independent samples T-test were used to test significant gender differences in the satisfaction with the dissertation process. Finally, multiple regression analysis was conducted to analyze the correlations between perceived stress, self-efficacy and satisfaction with the dissertation process.

Results

Results indicated that participants in this study reported moderate levels of satisfaction with the dissertation process. The independent-samples t-test indicated no gender differences in student satisfaction with the dissertation process. Descriptive statistics and multiple regression analysis indicated that both perceived stress and self-efficacy are positively and significantly correlated with satisfaction, suggesting that those with high levels of self-efficacy and moderate levels of perceived stress tend to be more satisfied with the dissertation process. Also, regression analysis indicated that the two predictor model accounts for 28% of the variance in satisfaction with the dissertation process.

Conclusions

In summary, high levels of dissertation self-efficacy and moderate or optimal levels of stress, influence satisfaction with the dissertation process and could enhance program completion of educational psychology doctoral students. Both students and institutions should focus on increasing doctoral candidates' dissertation self-efficacy,

maintaining moderate or optimal levels of stress and reducing high stress when necessary, and also on increasing student satisfaction with the dissertation process by maintaining program quality and encouraging positive and supportive student-advisor relationships.

Andrews University

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A thesis

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APPROVAL BY THE COMMITTEE:

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Member: Jimmy Kijai

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LIST OF ABBREVIATIONS

ABD	All-But-Dissertation
DAI	Dissertation Appraisal Inventory
DSES	Dissertation Self-efficacy Scale
GPA	Grade Point Average
PSS	Perceived Stress Scale
PSS-4	Perceived Stress Scale -4
PSS-10	Perceived Stress Scale -10
PSS-14	Perceived Stress Scale -14
SPSS	Statistical Package for Social Sciences
TTSC	Transactional theory of stress and coping

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CHAPTER 1

INTRODUCTION

Background

The doctoral degree is considered the ultimate degree of higher education in most parts of the world, and it could be either an academic or professional degree. This type of degree allows one to become an expert in one's field and qualifies the holder to teach at university level (Gray, 2014).

Currently, the main requirements for obtaining a PhD in the United States entail successful completion of doctoral level classes, passing of a comprehensive examination and defense of a dissertation. Most doctoral students have to face many challenges in order to successfully complete a doctoral degree, and for some students the dissertation becomes a major obstacle on their journey, "some of whom become and remain all-but-the-dissertation students" (Blum, 2010, p.74).

Over the past four decades, the rate of doctoral student completion in the United States has remained approximately 50% (Ali & Kohun, 2007; Lovitts, 2001; Walker, Golde, Jones, Conklin Bueschel, & Hutchings, 2008). Some researchers estimate that 40-60 % of doctoral students nationwide fail to obtain their degree, with most of them abandoning the program at the dissertation stage (Bair & Haworth, 1999; Berger, 2007; Bowen & Rudenstein, 1992; Ehrenber, Zuckerman, Groen & Brucker, 2009; Johnson, Green & Kleuver, 2000). An average time of eight years has been estimated for doctoral

students to complete a dissertation and earn a doctoral degree, but in the field of education the time is estimated at 12.7 years (Berger, 2007; National Science Foundation, 2009).

Researchers have found different factors to influence the dissertation process and ultimately dissertation completion. One of the main factors is student satisfaction with the dissertation process, in particular the student-advisor relationship and the support received from the advisor/dissertation chair, the faculty and the institution (Aguinis, Nesler, Quigley, Lee, & Tedeschi, 1996; Bair & Haworth, 1999; D'Andrea, 2002; Hoskins & Goldberg, 2005; Maher, Ford, & Thompson, 2004; Spaulding & Rockinson-Szapkiw, 2012; Tinto, 1993; West, Gokalp, Pena, Fisher, & Gupton, 2011). Student satisfaction has been found to be positively associated with student success (Noel-Levitz, 2011), student retention (Hatcher, Kryter, Prus, & Fitzgerald, 1992; Love, 1993), quality and overall effectiveness of a university program (Astin, Korn, & Green, 1987; Bailey, Bauman, & Lata, 1990; Love, 1993), as well as dissertation completion and program completion among doctoral students (Bair & Haworth, 1999, Bloom, Propost Cuevas, Hall, & Evans, 2007; Garcia, Malott, & Brethower, 1988; Goulden, 1991; Lovitts, 2001). In particular, doctoral students' satisfaction with their relationship with their advisor/dissertation chair has been linked to students' successful completion of their dissertations and programs of study (Bair & Haworth, 1999; Council of Graduate Schools and Educational Testing Service, 2010; Garcia et al., 1988; Lovitts, 2001; Neale-McFall, & Ward, 2015). When doctoral students fail to complete their degrees, there is a rise in attrition rates, and both programs and students suffer (Green, 1997; Neale-McFall &

Ward, 2015). Thus, the focus of this study would be on the relationship between perceived stress and self-efficacy with student satisfaction with the dissertation process.

Researchers identified self-efficacy and perceived stress as potential important factors in task completion (Bandura, 1977, 1986; Felsten & Wilcox, 1992; Lovitts, 2001; McDermott, 2002; Pajares, 2001; Pintrich & Garcia, 1991; Pritchard & Wilson, 2003; Rotter, 1966; Schunk, 1991; Wentzel, 1987; Zimmerman, 2000; Zimmerman & Ringle, 1981). These researchers suggest that self-efficacy plays an important role in task completion and students with high self-efficacy are: more likely to expend effort when it comes to task completion (Bandura, 1986, 1997), more likely to choose more challenging tasks because they are confident that they can accomplish those tasks successfully (Pajares, 2001), more likely to work harder on accomplishing a task and persist longer when encountering difficulties (Schunk, 1981; Zimmerman, 2000; Zimmerman & Ringle, 1981) and more likely to use more cognitive and metacognitive strategies and persist longer in task completion than those with low self-efficacy (Pintrich & Garcia, 1991).

Ojeda, Flores, and Navarro (2011) and Pinugu (2013) found self-efficacy to be directly linked to academic satisfaction in general, and Colvin (2012), Faghihi (1998), Harsch (2008) and Varney (2003, 2010) found dissertation self-efficacy to be positively related to dissertation progress.

Generally, researchers have found stress to be inversely related to academic tasks and outcomes (Felsten & Wilcox, 1992; Pritchard & Wilson, 2003; Russell & Petrie, 1992), however, some researchers found no association between stress and task performance and outcomes (Petrie & Stoever, 1997). Researchers such as Kaplan and Sadock (2000) have found that an optimal level of stress can enhance learning and studies

on graduate students reported moderate to high levels of stress (Bedewy a& Gabriel, 2015; Kaufman, 2006; Lazarus & Folkman, 1984; Myers et. al, 2012). On the other hand higher levels of stress have been associated with lower levels of academic satisfaction (Pinugu, 2013). Some studies (Pinuty, 2013) looked at the combined effects of stress and self-efficacy on satisfaction and the results indicated that self-efficacy and academic stress can predict academic satisfaction.

Purpose of the Study

The purpose of this study is to investigate the role of perceived stress and self-efficacy on student satisfaction with the dissertation process among doctoral students in educational psychology in selected universities in the United States. This area of research is important for the Educational Psychology field because it could expand the knowledge base about the role of cognitive and behavioral factors on task completion and outcomes such as dissertation completion, and it could be beneficial to educational psychology faculty, advisors and administrators in improving student satisfaction with the dissertation process, and enhancing program completion.

Research Questions

This study attempted to answer the following questions:

1. How satisfied are doctoral students in educational psychology with their dissertation process?

2. Is satisfaction with the dissertation process related to gender?

3. To what extent is satisfaction related to perceived stress and self-efficacy?

Conceptual Framework

The conceptual framework examines the relationship between the proposed variables in this study and it is guided by Albert Bandura's social cognitive theory with a particular emphasis on self-efficacy and student satisfaction, and the psychological stress theory proposed by Richard S. Lazarus and Susan Folkman. The framework's areas of focus are: (1) self-efficacy as a key element of the Social Cognitive Theory, its role in academic performance, and its relationship to student satisfaction on the dissertation process; and (2) perceived stress within the framework of Lazarus and Folkman's transactional model, and its relationship to the doctoral students' satisfaction with the dissertation process.

The Effects of Self-Efficacy on Academic Performance and
Satisfaction with the Dissertation Process

The concept of self-efficacy is a key element in Social Cognitive Theory. It was initially developed by Bandura as part of the Social Learning Theory, which later progressed into the Social Cognitive Theory. Based on the Social Cognitive Theory individuals are agents proactively engaged in their own development, adaptation and change. According to Bandura (2005), an agent is someone who intentionally influences one's life circumstances, "In this view, people are self- organizing, proactive, self-regulating, and self- reflecting. They are contributors to their life circumstances not just products of them" (Bandura, 2005, p.1).

Self-efficacy stands at the very core of social cognitive theory and has been defined by Bandura (1994) as individuals' beliefs in their own ability to organize and execute a given course of action to solve a problem or accomplish certain tasks in order to produce positive outcomes. A very important aspect of this theory is that individuals

possess self-beliefs, which Bandura refers to as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p.391).

According to Bandura (1997) people use different experiences to judge their efficacy and determine if they believe they have the ability to accomplish specific tasks, such as: *mastery experiences* which serve as an indicator for an individual's personal ability and refer to learning through personal experience where one achieves mastery over a difficult or previously feared task, a process that helps an individual to develop and refine skills and thus enjoy an increase in self-efficacy; *vicarious experiences*, occurring when individuals adjust their personal level of efficacy after witnessing other people's performance and comparing their ability to those of others; *social persuasions*, when people's level of efficacy is influenced by verbal persuasion; and *physiological states or feedback* will affect people's beliefs and levels of self-efficacy based on how they perceive their emotional experiences and states such as anxiety, stress, arousal, and mood states. Furthermore, in order to measure judgments of self-efficacy, three basic scales are used: magnitude (measures the difficulty level), strength (confidence about performing successfully at diverse levels of difficulty) and generality (the degree to which expectations can be generalized across situations).

Generally, self-efficacy has been found to play an important role on academic performance (Bandura, 1986; Pintrich & Garcia, 1991; Schunk, 1984, Zimmerman, 1989) and more specifically on dissertation progress and dissertation completion (Colvin, 2012, Dumitrescu, 2016; Faghihi, 1999; Harch, 2008; and Varney, 2003).

Some studies found significant positive relationships between self-efficacy beliefs and life satisfaction in general (Charrow, 2006; Coffman & Gilligan, 2002; Dahlke, 1992; Tong & Song, 2004), as well as job satisfaction (Canrinus et al., 2011; Klassen & Ming Chiu, 2010; Gkolia, Belias, & Koustelios, 2014). However, very few studies on self-efficacy and satisfaction were conducted on college and doctoral students. Those studies available indicate that students with high levels of self-efficacy are more likely to be more satisfied with their academic performance (Ansari & Khan, 2015; Coffman & Gilligan, 2002; DeWitz, 2002), and dissertation process (Faghihi, Rakov, & Ethington, 1999; Dumitrescu, 2016), and more likely to complete their dissertations (Colvin, 2012; Dumitrescu, 2016; Faghihi, 1999; Harsch, 2008; Varney, 2003).

<p style="text-align:center">The Effects of Perceived Stress on Academic Achievement and
Satisfaction with the Dissertation Process</p>

Stress is part of everyday living and it is unavoidable. In academic institutions, stress can have both positive and negative consequences (Stevenson & Harper, 2006). However, a person's response towards stress is what makes the difference. According to Lazarus and Folkman (1984), a person's response towards stress depends on whether an event is appraised as a challenge or a threat. While challenging stimulus can lead to positive outcomes such as motivation and improved task performance, distress can cause problems and have serious effects on people such as anxiety, depression, social dysfunction and even suicidal intention. Individuals tend to use a variety of coping mechanisms and strategies in order to deal with stressful life events.

Lazarus (1966) believed that stress did not actually exist in the event but rather is a result of a transaction between a person and his or her environment. He suggested that stress encompasses a set of factors: cognitive, affective, and coping factors. In order to

explain this interrelationship of factors, Lazarus developed and tested a transactional theory of stress and coping (TTSC) (Lazarus, 1966; Lazarus & Folkman, 1984). This model became very important in the field of cognitive psychology because it emphasizes the role of appraisal or self-evaluation on how a person reacts, feels and behaves.

Lazarus (1966) and Lazarus and Folkman (1984) identified three types of appraisal: primary, secondary and reappraisal. *Primary appraisal* is considered to be a judgment about how an individual perceives a situation. Individual perceptions of a situation are usually based on self-assessment of the possible effects of demands and resources. In case demands outweigh the available resources, then the individual may determine the situation represents either a threat (a potential for harm or loss), a harm (actual harm has already occurred), or a challenge (the situation may have potential for some gain or benefit). *Secondary appraisal* is the process used by an individual to determine the available coping options to deal with a threat and their effectiveness. Very often, primary and secondary appraisals occur simultaneously and interact with one another (Lazarus & Folkman, 1984). *Reappraisal* is the process by which an individual continually evaluates, changes and relabels earlier appraisals as the situation evolves. During reappraisal perceived threat may now be viewed as a challenge or irrelevant. Appraisals of threat may be influenced by several situational factors, including their number and complexity; an individual's values, goals, self-esteem, social support, coping skills; proximity, intensity, and duration of threat; and the controllability of the threat.

Lazarus's transactional model for stress includes two other important concepts: coping and stress emotions. Lazarus (1966) identified two forms of coping: direct action and palliative, but later changed their names to problem-focused and emotion-focused.

Problem-focused coping strategies are similar to problem-solving skills, while emotion-focused strategies are usually used to decrease emotional distress. The construct of stress emotions is considered to include anxiety, anger, sadness, guilt and fear, and affect thoughts, even though thoughts precede emotions.

Generally, stress has been negatively correlated with academic performance and task completion, and critical periods of stress were positively related to non-completion, with non-completers reporting more critical periods of stress that led to withdrawal from doctoral study when compared to those who completed doctoral study (Felsten & Wilcox, 1992; Pritchard & Wilson, 2003; Russell & Petrie, 1992). These are the sources of critical stress which differentiated completers from non-completers: academic pressures (Wood, 1978), work pressures (Feick, 1969; Nagi, 1974; Wood, 1978) and required examinations (Tierce, 1984). Additionally, Feick (1969) observed that non-completers reported more critical periods due to general discouragement, family problems and financial issues compared to completers.

A limited number of studies (Pinugu, 2013) looked at the influence of stress on academic satisfaction; however, their findings suggest that students who experience academic stress tend to have higher levels of anxiety, depression, may lack coping skills, and become dissatisfied with the educational experiences they encounter because of their negative perception.

Limited research is available on how perceived stress and self-efficacy influence student satisfaction. The findings of the available studies (Coffman & Gilligan, 2002) suggest that high efficacious students can cope better with stress and are more likely to report high levels of satisfaction.

Significance of the Study

This area of research is important for the Educational Psychology field because it could expand the knowledge base about the role of perceived stress and self-efficacy on student satisfaction with the dissertation process. Research in this area could be beneficial to doctoral students, dissertation advisors, departmental chairs, academic deans, and it could be utilized to gain greater awareness and insights on how to monitor doctoral students for specific characteristics such as procrastination, dependency, lack of confidence (self-efficacy) in handling academic and personal problems (finances, family responsibilities, geographic distance from the university), perceived stress and quality of contact between doctoral students and their dissertation advisor. Furthermore, this study will add to the literature by highlighting the effects of perceived stress, self-efficacy, and student satisfaction with the dissertation process on dissertation completion.

Definition of Terms

Definition Published Sources

The following terms and operational definitions are used throughout this study:

Dissertation self-efficacy is "the belief in one's ability to successfully write the doctoral dissertation" (Varney, 2003, p. 10).

Perceived stress is a stimulus-response interaction and refers to a condition or feeling experienced when a person perceives that "demands exceed the personal and social resources the individual is able to mobilize." (Lazarus & Folkman, 1984). For the purposes of this study, perceived stress will be measured by The Perceived Stress Scale-10 (PSS-10; Cohen & Williamson, 1988).

Self-efficacy is formally defined as "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1997, p. 2). For the purposes of this study, self-efficacy will be measured by The Dissertation Appraisal Inventory (DAI; Varney, 2003).

Student satisfaction refers to student perceptions of learning experiences associate with education (Elliott & Shin, 2002). For the purposes of this study student satisfaction will refer to doctoral students overall satisfaction with the dissertation process, as a factor influencing program completion.

Researcher's Definitions Based on Review of Literature

All-but-dissertation (ABD). The term ABD will be used within this paper to refer to those doctoral students who have completed their coursework and their oral and written comprehensive exams, but have not completed their dissertations.

Dissertation completion refers to the completion of all the requirements for dissertation such as writing of the proposal, acceptance of proposal, and successful defense.

Dissertation process refers to the process involved in writing the dissertation which is a major requirement for obtaining a doctoral degree.

Doctoral candidates are students who have completed all of the academic requirements for their degree, except their dissertation. This term will be used interchangeably with non-completers and ABD's.

Limitations

Results of this study will be constrained by the specificity of the convenience sample utilized -doctoral students in educational psychology programs from the selected

universities across the United States and could be generalized to other doctoral programs in educational psychology of similar/comparable program structure, but beyond that, care should be taken regarding the population to which these findings are generalized.

Another limitation of this study could be that some of those participants in the study who had already completed their dissertations or those who had been ABD for a long period of time will have to retrospectively recall their dissertation experience and selective memory may influence their reporting of their perceptions of self-efficacy and perceived stress. Additionally, as a descriptive correlational study, no causality was implied between or among the variables.

Delimitations

For the purposes of this study, data collection will be limited to doctoral candidates in educational psychology programs including completers and non-completers (ABDs) at selected universities across the United States. Program emphases in the educational psychology field included in the study are: General Educational Psychology; Human Development; Developmental Psychology; Cognitive Psychology; Behavioral Neuroscience; Learning and Behavior; School Psychology; Special Education; Psychometric Methods; Research & Evaluation.

Organization of Study

This study is organized into five chapters. Chapter 1 provides the background of the study and contains the purpose of the study, the research questions, the conceptual framework, the significance of the study, definitions of terms, limitations and delimitations of the study, and the organization of the study. Chapter 2 presents a review of related literature to the factors of self-efficacy, perceived stress and student satisfaction

with the dissertation process. Chapter 3 presents the methodology used which includes the research questions, research design, instrumentation, data collection procedures, and administration of data collection and analysis. Chapter 4 shows the results and the data analysis of the study, the statistical analysis, and the tables that show the relationships between the variables. Chapter 5 contains a summary of the study, a brief discussion about the most important findings of the study, and it also delineates conclusions, recommendations for practice, and recommendations for future research.

CHAPTER 2

REVIEW OF LITERATURE

Chapter 2 provides an overview of the available literature on the topic of satisfaction with the dissertation process. Discussed sequentially will be prior research on satisfaction with the dissertation process, as well as the role of the selected variables of self-efficacy and perceived stress, and their relationship with the dependent variable of satisfaction with the dissertation process.

Satisfaction with the Dissertation Process

Student satisfaction is important because it has been indicated to influence completion of doctoral programs (Hesli, Fink, & Duffy, 2003). The concept of student satisfaction refers to student perceptions of learning experiences associate with education (Elliot, Shell, Henry, & Maeir, 2005). This study examined students' overall satisfaction with their dissertation process in relation to program completion.

Previous studies indicate that students' satisfaction with their academic programs contributes favorably to doctoral degree completion (Lovitts, 1996). The opposite is true also: when students are dissatisfied with their doctoral programs, they are more likely to become disappointed, consider leaving graduate school and abandon doctoral study (Hesli et al, 2003; Lovitts, 1996). According to the meta-synthesis conducted by Bair and Haworth (1999) on factors that contributed to students' satisfaction with their doctoral programs, these are some of the items consistently mentioned in previous

studies: quality of the program, communication of students with administration and faculty, fairness in requirements, consistency in the evaluation of students, treatment of students as professionals and whether students received adequate guidance (Bair & Haworth, 1999).

Doctoral students most likely to complete their programs were those who reported higher levels of satisfaction with their programs, courses and instruction (Ducette, 1990) those who considered the course work to be of high quality and value (Valentine, 1986); those who indicated higher levels of satisfaction and indicated that their expectations had been met (Cooke, Sims, & Peyrefitte, 1995); and those who were not only satisfied with the programs of study, but also had a quality relationship with their advisor and faculty (Lovitts, 2001, 2008; Muszynski, 1988). In fact, Bair and Haworth's (1999) metha-synthesis indicated that the most frequent finding that held true across quantitative, qualitative, and mixed-methodology studies was the critical role played by the student-advisor relationship in doctoral students' decision to complete their dissertations and doctoral programs. Students who had positive relationships with their advisors and other faculty members were significantly more likely to complete their doctoral degrees than those students for whom such positive relationships did not exist (Bair & Haworth, 1999; Lovitts, 2001, 2008; Muszynski, 1988).

Studies on attrition of doctoral students have found that some of the reasons for student's departure were due in part to the fact that they received inadequate or inaccurate advising, the advisor was unavailable to the students or showed lack of interest or active guidance to the students, or because of poor quality, negative or conflictual relationships between the student and advisor (Lovitts, 1996, 2001; Muszynski, 1988; Nerad &

Cerney, 1991). Conversely, doctoral students who reported high levels of relatedness to their advisor, who perceived their advisors as more supportive and more personally interested in them, and those who reported more regular meetings and fewer delays in obtaining feedback, were more motivated and productive than those who did not have such advisors (Lan & Williams, 2005), were more likely to be satisfied with their programs (Hesli et al., 2003; Lan & Williams, 2005; Mason, 2012) and more likely to complete their dissertations (Faghihi et al., 1999) and their doctoral programs (Lovitts, 2001; Muszynski, 1988), Some researchers went so far as to have identified the student-advisor relationship as the most important factor in doctoral attrition and persistence (Girves & Wemmerus, 1988; Presley, 1996).

General Factors that May Explain Satisfaction

Prior research on student satisfaction has focused on academic teaching, academic staff, classes and other services such as advising (Gibson, 2010). Arena, Arnaboldi, and Azzone (2010) conducted some studies on international university students and found that highest student satisfaction scores among Italian students in higher education were attributed to accuracy and consistency of the information received from the student support offices, while lowest scores were related to waiting times and opening hours. These researchers indicated that undergraduate students tended to be more satisfied than graduate students and the variables which influenced most student satisfaction were personnel courtesy and competence, and their availability to provide to students when needed.

Another study (Jalali, Islam, & Ariffin, 2011) conducted predominantly on graduate students found moderate levels of student satisfaction. Lower student

satisfaction scores were associated to financial services and staff availability, as well as with larger universities (more than 15,000 students). A similar study found that most student dissatisfaction was associated with teaching styles and techniques, administration, staff and computer/lab facilities (Abbasi, Malik, Chaudhry, & Imdadullah, 2011).

A study conducted by Hameed and Amjad (2011) found positive correlations between faculty and students' experiences, with higher satisfaction being associated with faculty members who were more experienced, cooperative and understanding of students' needs, as well as advising staff members who were willing to help and understand students.

Research on student satisfaction conducted in the U.S. agrees in most part with research conducted in international institutions. A study conducted by Jones (2008) indicated that in addition to classroom instruction and support, students' satisfaction and motivation were influenced by outside classroom support. On the other hand, Steele (2007) has found the following factors to contribute to overall satisfaction: knowledge of the instruction, instructor support and flexibility of scheduling.

Most students perceive school to be one of the most stressful periods of their lives. A study conducted by Niebling and Heckert (1999) suggests that some of the sources of stress indicated by students are: 38% stress from intrapersonal stressors (e.g., new responsibilities), 28% stress from environmental stressors (e.g., change in living conditions), 19% stress from interpersonal stressors (e.g., conflicts with boyfriends/girlfriends), and 15% stress from academic stressors (e.g., low grades). Other researchers (Chao, 2012; Darling, McWey, Howard, & Olmstead, 2007) indicate other issues that can be a source of stress for students: academic grade anxiety, financial issues,

family matters, interpersonal relationships, relations with the opposite sex, and ambiguity

about future plans. Other sources of stress could be related to conflicts with roommates,

changes in sleeping and eating habits, public speech, and increased course workload

(Darling et al., 2007).

On the other hand, social support has been shown to have a positive impact on

students' satisfaction with their schooling experience (DeSantis King et al., 2006).

Students who receive social support from friends and family, as well as faculty and

school staff are more likely to indicate higher levels of life satisfaction than those who

don't (Fakunmoju, Donahue, McCoy, & Mengel, 2016; Mahanta & Aggarwal, 2013).

Specific Factors that May Explain Satisfaction with the Dissertation Process: Self-Efficacy and Perceived Stress

Self-efficacy refers to people's beliefs about their capabilities to accomplish

different tasks, and it can influence individuals' behaviors either positively or negatively,

based on their perception of their abilities regarding particular tasks. Self-efficacy

influences the choices people are mostly likely to make, the effort they put forth, and how

long they persist when facing challenging situations, obstacles and failure (Bandura,

1986). High self-efficacy beliefs are also related to the expansion of satisfying social

relations which bring satisfaction to an individual's life (Bandura, 1997). Thus,

satisfaction should be high in self-efficacious individuals.

A few studies conducted on self-efficacy beliefs and life satisfaction in general

found significant positive relations between these two concepts (Coffman & Gilligan,

2002; Tong & Song, 2004). Also, studies on self-efficacy and job satisfaction revealed

positive relations as well (Klassen & Chiu, 2010; Gkolia et al., 2014). However, very few

studies on self-efficacy and satisfaction were conducted on college students (Coffman & Gilligan, 2002; Tong & Song, 2004). According to my knowledge up to this point there is only one study conducted on doctoral students (Overall, Deane, & Peterson, 2011), which assessed how students' satisfaction with different types of doctoral supervision is associated with students' research self-efficacy in counseling psychology students. The results of this study indicate that a supervisory style which encouraged students to think and act autonomously was not associated with students' satisfaction, but was the strongest predictor of students' research self-efficacy. These findings suggest that a supervisory nurturing style and greater levels of personal support may increase student satisfaction, but may limit students' autonomy and their ability to become independent researchers. Additionally, these findings suggest that a combination of greater autonomy and academic and personal support from supervisors will positively affect students' research self-efficacy as well as their satisfaction.

Researchers have found that an optimal level of stress can enhance learning ability (Kaplan & Sadock, 2000), but too much stress can be detrimental and cause physical and mental health problems (Laio, Lu, & Li, 2007) and may affect students' academic achievement (Choi, Abbott, Arthur & Hill, 2007; Elliot et al., 2005; Hofer, 2007).

Previous research found positive correlations between self-efficacy and academic performance, as well as persistence in college (Lent et al. 1984, 1986; Stuart, 2013; Zajacova, Lynch, & Espenshade, 2005), but negative correlations between perceived stress and academic achievement (Choi et al., 2007; Elliot et al., 2005; Hofer, 2007). Limited studies have looked at the combined influence of self-efficacy with academic

stress and student satisfaction even though self-efficacy is considered to have an essential role in individuals' capacity to persist during stressful and difficult situations (Hamill, 2003; Schwarzer & Renner, 2000).

Pinugu (2013) has investigated the association between self-efficacy, academic stress and academic satisfaction in college students. The findings of this study showed that there was a positive association between self-efficacy and academic satisfaction and negative associations with academic stress. While self-efficacy and academic stress influenced academic satisfaction independently, there was no combined influence on academic satisfaction. Regarding the positive association between self-efficacy and academic satisfaction, it can be inferred that when students have high levels of efficacy and are confident in their abilities in addressing specific tasks and situations, then they will have the ability to overcome these and they will feel satisfied with their academic experiences. Conversely, if students are not very confident in their ability to perform certain tasks, then they may perceive their overall education experience in a negative light. These findings are similar to another study conducted among Mexican American students and which found that self-efficacy lead to academic progress and positive outcome expectations and this lead to academic satisfaction (Ojeda et al, 2011).

Regarding the negative association between self-efficacy and academic stress, this suggests that when students encounter high levels of stress this can decrease their self-efficacy. Also, when they feel capable of doing certain tasks then they will perceive problems and stressful tasks as non-threatening, but when students perceive tasks as draining and exhausting their belief in themselves to overcome problems can be

endangered. This has been observed for both students and educators as well (Vaezi & Fallah, 2011).

According to Pinugu (2013), no significant interaction effects were observed for self-efficacy and academic stress in relation to academic satisfaction. This may suggest that when academic stress is present students may experience anxiety, tiredness, depression, and they may become dissatisfied in the educational experiences they encounter because their perception toward their academic environment and the experiences attached to it would most likely be negative. The author of this study suggests that the lack of combined effect for efficacy and stress on satisfaction may be attributed to other factors closely related to these factors such as coping strategies and social support.

Another study conducted by Civitci (2015) on college students in Turkey found that the students having high college and major belonging (or psychological adjustment) had low perceived stress and high satisfaction. This indicates that college belonging has a "buffer" role (Frazier, Tix, & Barron, 2004) which may decrease the negative effect of perceived stress on satisfaction.

Limited research is available on how self-efficacy and perceived stress influence student satisfaction. The researchers (Coffman & Gilligan, 2002) who investigated these relationships have found that students who reported higher levels of self-efficacy and lower levels of perceived stress also reported higher levels of life satisfaction. This suggests that high efficacious students can cope better with stress and are more likely to report high levels of satisfaction.

Very few studies have focus on self-efficacy and student satisfaction (DeWitz & Walsh, 2002; Torres & Solberg, 2001), but this seems a topic worthy of study since it can enhance the understanding of student satisfaction and optimal academic achievement. The satisfaction that students experience in their academic journeys may be traced to their level of perceived efficacy and the challenges they face, their belief in their own abilities, and the social and academic rewards they gain out of these experiences may lead to their respective academic success (Pinugu, 2013).

CHAPTER 3

METHODOLOGY

Introduction

The present study was designed to investigate the role of perceived stress and self-efficacy on student satisfaction with the dissertation process among doctoral students in educational psychology in selected universities across the United States. The dependent variable examined in the current study is satisfaction with the dissertation process. The independent variables examined in the current study are: perceived stress and self-efficacy. The demographics included in the current study are: gender, marital status, employment status, geographic distance from university, financial support, social support, dissertation status, and time limit in completing the dissertation.

This chapter highlights the methodology used within the study. The research design, population, instrumentation, reliability and validity of the instrument, sampling and data collection procedures, and analysis procedures are discussed.

Research Questions

This study attempted to answer the following questions:

1. How satisfied are doctoral students in educational psychology with their dissertation process?

2. Is satisfaction with the dissertation process related to gender?

3. To what extent is satisfaction related to perceived stress and self-efficacy?

Research Design

The current study is a correlational study using an online survey research methodology. For the purposes of this study, a convenience sampling has been used to examine the relationship between perceived stress and self-efficacy with satisfaction with the dissertation process among doctoral students in Educational Psychology from selected universities across the United States.

Surveys are used to describe attitudes, beliefs, opinions and other types of information. Survey research is conducted by using a sample of subjects and administering a questionnaire to collect data. Currently, the online survey method is the most widely utilized to gather data from a target audience. Online survey is considered a more efficient method of collecting data from respondents when compared to other survey methods such as paper-and-pencil method and personal interviews. Other advantages of online surveys are: 1) *Cost efficient* (it is significantly cheaper than using the traditional survey methods); 2) *Automation* (responses are automatically stored in a survey database and this decreases the possibility of data errors); 3) *Higher response rates* (has the ability to collect data from a large number of respondents in a relatively short time, and respondents can answer the questionnaire at their own pace and chosen time); 4) *No need for interviewer* (respondents may be more willing to share personal information when they are not disclosing it directly to another person); 5) *Flexibility of design.* Internet surveys allow more flexibility for complexity of surveys).

There are some disadvantages of online surveys, such as: 1) *Limited respondent availability* since certain populations may not have internet access; 2) *Survey fraud.* Some people may be motivated to participate in online research only for the sake of

getting an incentive and not necessarily for having a desire to contribute to the advancement of research.

Population and Sample

Participants for this study were recruited through a convenience sampling procedure from selected Educational Psychology doctoral programs across the United States. Students from the following emphases within the educational psychology field were included: general educational psychology, human development, developmental psychology, cognitive psychology, behavioral neuroscience, learning and behavior, school psychology, special education, research and evaluation, and psychometric methods. For the purposes of this study, the population consisted of doctoral candidates or ABD's (non-completers) and recent graduates (completers) in educational psychology from 30 universities across the United States.

Forty-eight universities across the United States were randomly selected and only 30 of them agreed to participate in the research study. By drawing PhD candidates in educational psychology from different states across the country it was hoped to obtain a sample which would represent the target population of PhD educational psychology students nationwide, thus increasing the generalizability of the results.

Participants were contacted by program directors via email and asked via electronic mail if they would be willing to participate in this study and fill out the survey provided. Additional information regarding the process of contacting participants and collecting the data is provided in the sampling procedure section.

Instrumentation

In this section, the measurement instruments will be outlined and discussed. In order to obtain psychometric data for this study, three measurement instruments and a demographic questionnaire were utilized for this study: 1) The PSS (Cohen et al., 1983); 2) The DSES or DAI (Varney, 2003); 3) One item Likert-scale measuring satisfaction with the dissertation process, and 4) A demographic questionnaire.

Perceived Stress Scale

The PSS (Cohen et al., 1983; Appendix A) is considered one of the most popular and has been widely used for measuring the perception of stress. The PSS measures the extent to which life situations are appraised stressful and it was designed to be used in community samples with at least a junior high school education. Most questions in the PSS ask about feelings and thoughts during the last month, but the scale also includes a number of direct queries about current levels of experienced stress.

There are three versions of the PSS. The original instrument is a 14-item scale known as Perceived Stress Scale 14 (PSS-14) and developed by Cohen et al. in 1983. The second version known as Perceived Stress Scale 10 (PSS-10) and including only 10 items was introduced five years later after using factor analysis based on data from 2,387 U.S. residents. The third version consisting of only four items and known as Perceived Stress Scale 4 (PSS-4) was developed to be used for phone interviews or situations requiring a very short scale (Cohen & Williamson, 1988).

For the purposes of the current study, the PSS-10 version will be used. The PSS-10 takes only a few minutes to fill out and is easy to score. The items are introduced with "*In the last month, how often have you felt . . .*" For the purposes of this study this

introductory statement has been changed to "*during the dissertation process, how often have you felt . . .*", and then followed by such items as *nervous and stressed, that difficulties were piling up so high that you could not overcome them,* and *that you could not cope with all the things that you had to.* Responses are scored on a five-point Likert-type scale ranging from 1 (never) to 5 (very often). Items 4, 5, 7, & 8 are the positively stated items. Scores are obtained by reversing responses on the four positive items (e.g., 1=5, 2=4, 3=3, 4=2 & 5=1) and then summing across all 10 items to create a psychological stress score, with higher scores indicating greater psychological stress.

The PSS-10 was normed on both college and community samples. Internal reliability (Cronbach's alpha) for the PSS-10 was determined in three separate tests using three samples, two college students samples and one sample including a heterogeneous group in a smoking cessation class, and Cronbach's alpha reliability coefficients ranged from .84 to .86. Additionally, a test-retest correlation was administered to a group of college students from the University of Oregon. The test conducted two days apart and the students were encouraged to strive for accuracy rather than consistency across time. Two test-retest correlation results was found to be .85 (Cohen, 1983).

Validity was determined with extensive normative data on 2,387 respondents. Correlations of .76 and .65 were found between the PSS-10 and depressive symptoms (Cohen et al, 1983). More recent studies have indicated and validated the potential associations of perceived stress as measured by the PSS-10 and several outcomes such as stress measures, health behavior measures, self-reported health and health services, smoking status and help seeking behavior (Cohen et al, 1988; Koopman, et al., 2000).

Dissertation Self-Efficacy Scale

The DSES (Varney, 2003; Appendix A) is a self-report measure designed to assess students' beliefs in their ability to complete a dissertation. It has been developed by James Varney (2003) and is the only instrument available that specifically measures dissertation self-efficacy or an individual's belief in his ability to perform dissertation related tasks for the purpose of dissertation completion. The DSES consists of 16 items targeting specific dissertation completion tasks and ask respondents to rate how confident they are in their ability to successfully accomplish those tasks. Examples of such tasks include, (a) selecting a suitable dissertation topic, (b) selecting appropriate statistical methodology, (c) collecting adequate dissertation data records or field notes, (c) writing the results section of the dissertation (Varney, 2003).

Responses are rated on a scale of 0 = "No confident at all" to 100 = "Completely confident," but for the purposes of this study a scale of 0-10 was used. Scoring of this measure and calculating the dissertation self-efficacy is performed by adding the responses of all 16 items and then diving by 16 to obtain a mean score. Scores from 0 to 3.3 indicate a low level of self-efficacy, scores from 3.4 to 6.7 indicate a moderate level of self-efficacy, and scores from 6.8 to 10 indicate a high level of self-efficacy (Harsch, 2008). Internal consistency reliability of the DSES was shown by a Cronbach's alpha of .97 in a sample of 29 first-year and 22 second-year education doctoral students from a small Midwestern university (Varney 2003, 2010).

In order to increase reliability and validity of DSES, Varney (2003) employed the following validation procedures: (a) submitted the DSES to a panel of experts, (b) administered the DSES to a pilot group of education doctoral students currently enrolled

in or having recently graduated in an Education doctoral program other than the

Midwestern university's doctoral program, (c) conducted an item analysis on pilot data,

(d) conducted both exploratory and confirmatory factor analysis on pilot data, and (e)

provided evidence for DSES construct validity based upon the findings from procedures

listed in steps 1-4.

Based on the factor analysis interpretation, Varney (2003) found statistically

significant positive relationships between dissertation self-efficacy and dissertation

progress (r = .556, p = .000) indicating that students with the highest dissertation self-

efficacy showed the most amount of dissertation progress, while students with lower

confidence in their ability to work on their dissertation showed the least amount of

dissertation progress. Although Varney's findings did not indicate a relationship between

the three doctoral program components and dissertation progress, he suggested that they

are a source of dissertation self-efficacy. In other words, Varney suggested dissertation

self-efficacy to be a mediating variable between dissertation progress and the three

doctoral program components (doctoral students' perceptions of the value of being part of

a cohort, being mentored and being involved in dissertation preparation). Further

construct validation of DSES occurred as part of a follow up study conducted by Varney

in 2010 and supported the conclusion that there was good dissertation self-efficacy

construct validity and that DSES appears to reliably measure a construct consistent with

self-efficacy theory.

Harsh (2008) used the DSES (also known as the DAI) developed by Varney

(2003) to investigate the role of self-efficacy, locus of control and self-handicapping in

dissertation completion. After conducting exploratory factor analysis and investigated

one-factor and two-factor solutions, Harsch indicated that the internal consistency reliability estimate in her sample (132 dissertation non-completers and 111 dissertation completers across the United States) or Cronbach's alpha was .90 (compared to Cronbach's alpha of .97 in Varney's 2003 study) and she supported Varney's (2003) single factor solution, namely self-efficacy. Harsch found that completers scored significantly higher than non-completers on the construct of dissertation self-efficacy. However, she indicated that it was difficult to establish a link between dissertation self-efficacy and dissertation completion.

In a more recent study, Colvile (2012) found dissertation self-efficacy to be significantly and positively related to dissertation progress, as well as to academic help-seeking attitudes and achievement goal orientations. Comparable to Varney (2003) and Harsch (2008), Colvile (2012) reported similar internal consistency reliability or Cronbach's alpha of .94 for Investigative and Social doctoral candidates without removing scale items.

Satisfaction with the Dissertation Process

For the purposes of this study, satisfaction with the dissertation process has been measured by a single, straight forward question on how satisfied doctoral candidates and recent graduates were with the dissertation process. The question was a 5 point Likert scale allowing respondents to express how satisfied or dissatisfied they were with the dissertation process. Responses ranged from (1) "not at all satisfied" to (5) "completely satisfied" (see Appendix).

Internal consistency reliability has been performed for the purposes of this study for self-efficacy, and perceived stress. As noted in Table 1 all final Cronbach's alphas

were acceptable, with estimates ranging from .80 to .95. The widely-accepted social science cut-off is that alpha should be .70 or higher (Schmitt, 1996).

Table 1

Reliability for Perceived Stress and Self-Efficacy

Scale	No. items	Chronbach's alpha
Perceived Stress	16	.901
Self-efficacy	16	.955

Demographic Questionnaire

The demographic questionnaire used in this study (see Appendix) collected information regarding participants' age, sex, ethnicity, marital status, employment status, residence status, dissertation status, program area, time limit in completing the doctoral program, overall satisfaction with the dissertation process, and environmental factors (finances; emotional support received from friends; family members and committee members). The questionnaire was developed by Harsch (2008) and some items were adapted for the purposes of the current study.

Procedure

The data for this study is owned by the researcher based on a previous study. The following is the criteria used for collecting the data.

Forty-eight universities across the United States offering doctoral degrees in Educational Psychology were randomly selected and contacted for the purpose of collecting data for this study, but only 30 of them agreed to participate in the research study.

The department chairs and program coordinators of the selected universities offering Educational Psychology degrees were contacted and asked if they would be willing to participate in this study. After receiving participation approval from department chairs, program coordinators contacted their doctoral students on behalf of the researcher and emailed them a survey invitation prepared by the researcher, and a link where doctoral students could access the survey.

Data for this study was collected via an online survey hosted by SurveyMonkey. The prepared survey invitation included a brief description of the study and an invitation to participate by accessing the provided link. Once the provided link was accessed, before completing the survey, participants were presented with an Informed Consent Form that described the participation procedure. Those who agreed to participate were then instructed to check the consent box and proceed to the next page in order to complete de survey. The estimated time for the completion of the survey was 10-20 minutes and this was indicated in the Informed Consent Form. Participants were also informed about their right to withdraw from participation at any time without penalty and about their right to contact the researcher of the study or the dissertation chair in case they had any questions about the study. Participants were also assured of confidentiality and anonymity.

Data Analysis

Data gathered from the survey was analyzed with the Statistical Package for Social Sciences (SPSS) Version 20.0 for Windows. Descriptive statistics analysis was performed by frequency, mean and standard deviation to find out how satisfied were doctoral students in educational psychology with the dissertation process. Independent samples T-test were used to test significant gender differences in the satisfaction with the

dissertation process. Finally, multiple regression analysis was conducted to analyze the

correlations between perceived stress, self-efficacy and satisfaction with the dissertation

process.

CHAPTER 4

RESULTS

Introduction

The purpose of this study is to examine the relationship between perceived stress, self-efficacy, and satisfaction with the dissertation process. In this chapter I will first give a description of the participating sample and demographics of this study. Unless otherwise indicated, percentages are based on the number of respondents reporting. I will then present a report of the findings and the analyses of the data. Only statistically significant results will be discussed. The threshold for significance, which is the acceptable probability for a significant finding to have occurred by chance, was set at $\alpha < .05$.

Description of the Sample

The final research sample included 151 educational psychology students from 30 universities across the United States. Demographic information about the sample is presented in Table 2.

Table 2
Demographic Characteristics of Participants (N =151)

Demographic Characteristic	N	%
Gender		
Female	114	75.5
Male	37	24.5

Table 2 – *Continued*

Demographic Characteristic	N	%
Residence Status		
On campus	8	5.2
Off campus	114	74.5
Out of state	24	16.3
Out of the country	5	3.3
Program Emphasis		
General Ed. Psych	9	5.9
Human Development	8	5.2
Developmental Psychology	20	13.1
Cognitive Psychology	19	12.4
Behavioral neuroscience	5	3.3
Learning & Behavior	12	7.8
School Psychology	43	28.1
Special Education	3	2.0
Research & Evaluation	2	1.3
Psychometric methods	19	12.4
Other	11	7.9
Doctoral Program Status		
Still doing course work	8	5.2
Completed required courses	4	2.6
Preparing for comprehensive exams	2	1.3
Completed comprehensive exams	6	3.9
Writing dissertation proposal	39	26.1
Dissertation proposal approved	38	24.8
Received doctoral degree	54	35.3
Dissertation Status		
Deciding upon a topic	18	11.8
Writing the chapters for proposal	39	25.5
Proposal approved, not collecting data	3	2.0
Proposal approved, collecting data	14	9.8
Analyzing data	9	5.9
Writing final dissertation chapters	14	9.8
Successfully defended dissertation	8	5.2
Dissertation submitted/approved by graduate school	46	30.1
Time Limit		
4 years	3	2.0
5 years	26	17.0
6 years	19	12.4
7 years	30	19.6
8 years	16	11.1
9 years	4	2.6
10 years	18	11.8

Table 2 – *Continued*

Demographic Characteristic	N	%
No time limit	35	22.9
Employment status		
Full time	47	30.7
Part time	62	40.5
Not employed	42	28.1
Financial Security		
Not at all secure	2	1.3
Minimally secure	23	15.0
Somewhat secure	41	26.8
Moderately secure	37	24.8
Completely secure	48	32.0
Emotional Support		
None	11	7.2
Below average	30	19.6
Average	46	30.7
Above average	37	24.2
Exceptional	27	18.3
Satisfaction with the Dissertation Process		
Not at all satisfied	7	4.6
Minimally satisfied	23	15.0
Somewhat satisfied	56	37.3
Moderately satisfied	52	34.6
Completely satisfied	13	8.5
Total	151	100.0

*Percent may not add to 100 due to missing values

Demographics

Table 2 presents the demographic characteristics of the participants. One hundred and fifty-three individuals participated in this study. The sample included 75.2% females and 24.2% males with the youngest participant being 22 years old and the oldest 65 years old. The average age of participants was 33.72 years (SD = 8.45).

In terms of residence status, out of the 151 participants 9 (5.9%) of them reported living on campus, 114 (74.5%) living off campus/community, 25 (16.3%) living out of state and 5 (3.3%) out of the country.

Under the umbrella of educational psychology there are several emphases. The following is a breakdown of the 151 doctoral students in the field of educational psychology who participated in this study: 9 (5.9%) were general educational psychology, 8 (5.2%) human development, 20 (13.1%) developmental psychology, 19 (12.4%) cognitive psychology, 5 (3.3%) behavioral neuroscience, 12 (7.8%) learning and behavior, 43 (28.1%) school psychology, 3 (2.0%) special education, 2 (1.3%) research and evaluation, 19 (12.4%) psychometric methods, and 12 (7.8%) other emphases in psychology.

Regarding current status in the doctoral program, 54 (35.3%) participants received their doctoral degree within the past 6 years, 1 (0.7%) participant withdrew from the program with no plans to return, 8 (5.2%) were still doing course work at the time of completing the survey, 4 (2.6%) completed required coursework, 2 (1.3%) were preparing for comprehensive exams, 6 (3.9%) completed comprehensive exams, 40 (26.1%) were writing their dissertation proposal, and 38 (24.8%) had their dissertation proposal approved at the time of taking the survey.

Concerning current dissertation status, 18 (11.8%) were still deciding on a topic, 39 (25.5%) were writing the chapters for the proposal, 3 (2.0%) had their proposal approved but were not collecting data, 15 (9.8%) had their proposal approved and were collecting data, 9 (5.9%) were analyzing data, 15 (9.8%) were writing final dissertation

chapters, 8 (5.2%) successfully defended their dissertations, and 46 (30.1%) had their dissertation submitted and approved by the graduate school.

Regarding the average time limit allowed by their respective universities for completing a doctoral degree, out of the 151 participants who responded to this question, 35 (22.9%) indicated that their respective universities required "no time limit", 18 (11.8%) indicated a 10-year time limit, 4 (2.6%) indicated a 9-year time limit, 17 (11.1%) indicated an 8-year time limit, 30 (19.6%) indicated a 7-year time limit, 19 (12.4%) indicated a 6-year time limit, 26 (17.0%) indicated a 5-year time limit, and 3 (2.0%) indicated a 4-year time limit. The average time limit reported by participants was 4.91 years (SD = 2.27).

During the majority of their doctoral studies, 47 (30.7%) participants reported that they were employed full time, while 62 (40.5%) of them reported being employed part time and 43 (28.1%) being unemployed.

Regarding financial security during the dissertation process, out of 151 respondents 49 (32.0%) indicated that they were 'completely secure,' 38 (24.8%) were 'moderately secure,' 41 (26.8%) were 'somewhat secure,' 23 (15.0) were 'minimally secure,' and 2 (1.3%) were 'not at all secure.' On average, participants indicated that they were 'moderately secure' financially (M = 3.71) during the dissertation process.

When asked to rate the degree of emotional support participants received from their dissertation advisor, out of the 151 respondents 11 (7.2%) indicated that they received no emotional support, 30 (19.6%) received "below average" emotional support, 47 (30.7%) indicated that they received 'average' emotional support, 37 (24.2%) received 'above average' emotional support, and 28 (18.3%) indicated that they received

'exceptional' emotional support. Participants of this study indicated that they received 'average' emotional support (M = 3.27) from their advisor during the dissertation process.

Asked about the overall satisfaction with the dissertation process, out of the 153 respondents 7 (4.6%) indicated that they were 'not at all satisfied,' 23 (15.0%) were 'minimally satisfied, 57 (37.3%) were 'somewhat satisfied,' 53 (34.6%) were 'moderately satisfied,' and 13 (8.5%) were 'completely satisfied." Participants of this study indicated that they were 'somewhat satisfied' (M = 3.27) with the dissertation process.

Results by Question

Research Question One

Research question 1: How satisfied were doctoral students in educational psychology with the dissertation process?

The single, straight forward question was created to find out how satisfied doctoral candidates and recent graduates were with the dissertation process. The question was developed as a 5-point Likert scale with responses ranging from 1 (not at all satisfied) to 5 (completely satisfied). In Table 3 student satisfaction shows a total mean of 3.30 out of a possible score of 5. The standard deviation of this scale was 0.96. Scores of 3.3 indicate a moderate level of satisfaction with the dissertation process.

Table 3
Descriptive Statistics

	N	Min.	Max.	Mean	SD
Satisfied with the dissertation process	151	1	5	3.30	.96

Research Question Two

Research question 2: Is satisfaction with the dissertation process related to

gender?

An independent-samples t-test was conducted to compare satisfaction with the

dissertation process between males and females. Table 4, 5 and 6 show that there were no

significant differences in satisfaction with the dissertation process scores for female (M =

3.31, SD= 0.96) and male (M= 3.27, SD= 0.96); t (149)0 .20, p = 0. 84. These results

suggest that satisfaction with the dissertation process is not related to gender.

Table 4
Group Statistics (N= 151)

Satisfaction with Error Diss. Process	N	Mean	SD	Std. Error Mean
Female	114	3.31	.96	.090
Male	37	3.27	.96	.158

Table 5
Independent Samples Test

	Levene's Test for Equality of Variances	
	F	Sig.
Equal variances assumed	.009	.923
Equal variances not assumed		

Table 5 – *Continued*

Test for Equality of Means	t	df	Sig. (2-tailed)	Mean differences
Equal variances assumed	.202	149	.840	.037
Equal variances not assumed	.202	61.04	.841	.037

Research Question Three

Research question 3: To what extent is satisfaction related to perceived stress and self-efficacy?

Correlation and multiple regression analysis were conducted to examine the relationship between satisfaction with dissertation process and potential predictors such as perceived stress and self-efficacy. Table 6 summarizes the descriptive statistics and analysis results. As can be seen in Table 7, both perceived stress and self-efficacy are positively and significantly correlated with satisfaction, indicating that those with high levels of self-efficacy and moderate levels of perceived stress tend to be more satisfied with the dissertation process.

Table 8 shows that the multiple regression model produced $R^2 = .275$, $F(2, 148) = 28.04$, $p < .05$, indicating that the two predictor model was able to account for 28% of the variance in satisfaction with the dissertation process.

Table 6
Regression Analysis – Descriptive Statistics

	Mean	SD	N
How satisfied are/were you with the dissertation process?	3.30	.95	151
Self-efficacy	7.05	1.86	151
Perceived stress	3.11	.68	151

Table 7
Correlations

	Perceived	Satisfaction with Dissertation process	Self-efficacy	stress
Pearson Correlation	Satisfaction	1.000	.431	-.452
	Self-efficacy	.431	1.000	-.420
	Perceived stress	-.452	-.420	1.000
Sig. (1-tailed)	Satisfaction		.000	.000
	Self-efficacy	.000		.000
	Perceived stress	.000	.000	
N	Satisfaction	151	151	151
	Self-efficacy	151	151	151
	Perceived stress	151	151	151

Table 8
ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.815	2	18.908	28.047	.000
Residual	99.774	148	.674		
Total	137.589	150			

Summary of Major Findings

Major findings from question one indicate that participants in this study reported moderate levels of satisfaction with the dissertation process.

Major findings from question two indicate that satisfaction with the dissertation process is not related to gender.

Major findings for questions three indicate that the model explains 28% of the variance in satisfaction with the dissertation process and that satisfaction is correlated

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with both self-efficacy and perceived stress. This suggests that doctoral students with

high self-efficacy and moderate levels of stress are more likely to be satisfied with the

dissertation process.

CHAPTER 5

SUMMARY, DISCUSSION, AND IMPLICATIONS

Introduction

In this chapter I will summarize the information contained in the previous four chapters by reviewing the purpose of the study and the statistical methodology employed, and presenting the key findings of the present study. Then, the findings of this study will be discussed according to current literature. Implications of this study for practice will be included, limitations will be identified, and recommendations for future research will be also explored.

Summary of the Purpose of the Study

The purpose of this study is to investigate the role of perceived stress and self-efficacy on student satisfaction with the dissertation process among doctoral students in educational psychology in selected universities in the United States. This area of research is important for the Educational Psychology field because it could expand the knowledge base about the role of cognitive and behavioral factors on task completion and outcomes such as dissertation completion, and it could be beneficial to educational psychology faculty, advisors and administrators in improving student satisfaction with the dissertation process, and enhancing program completion.

Summary of Methodology

The present study employed a non-experimental, correlational research design using a survey research method. Participants of this study completed surveys that measured their (a) perceived stress, (b) self-efficacy, and (c) satisfaction in relation to the dissertation process. A demographic questionnaire was also used to collect data about the characteristics of the sample population.

Perceived Stress was measured with the PSS-10 (Cohen et al., 1983). Dissertation self-efficacy was measured with the DSES (Varney, 2003). Student Satisfaction was measured by a single, straight forward question on how satisfied doctoral candidates and recent graduates were with the dissertation process. The question was a 5 point Likert scale allowing respondents to express how satisfied or dissatisfied they were with the dissertation process. Responses ranged from (1) "not at all satisfied" to (5) "completely satisfied". The sample was collected using convenience sampling. Participants were randomly recruited from a number of universities across the United States offering doctoral degrees in educational psychology and asked to complete the online survey hosted by SurveyMonkey.

Data gathered from the survey was analyzed with SPSS Version 20.0 for Windows. Descriptive statistics analysis was performed by frequency, mean and standard deviation to find out how satisfied were doctoral students in educational psychology with the dissertation process. Independent samples T-test were used to test significant gender differences in the satisfaction with the dissertation process. Finally, multiple regression analysis was conducted to analyze the correlations between perceived stress, self-efficacy and satisfaction with the dissertation process.

Summary of Major Findings

Respondents' Demographic Characteristics

A total of 191 individuals attempted to complete the online survey. However, a number of 40 cases were eliminated due to large number of missing responses and other missing data from the remaining cases were replaced by the mean values of the corresponding variables. The final sample consisted of 151 participants who met the criteria of being doctoral candidates or recent graduates in educational psychology and its respective emphases. Seventy-five percent of participants were female. Participants ranged in age from 22 to 65, with a mean of 33.72. Sixty-five percent of the participants identified themselves as doctoral candidates at different stages in terms of dissertation status, and 35% of the participants graduate within the past 6 years from an Educational Psychology program.

The average time limit for completion reported by participants was 4.91 years, with 22.9% indicating that their respective universities required "no time limit." Thirty percent of the participants reported being employed full time during the majority of their doctoral studies, while 40.5% reported being employed part time and 28.1% being unemployed. The majority of participants ($M = 3.75$) indicated being moderately secure financially during their doctoral studies, and receiving average emotional support ($M = 3.27$) from their advisor during the dissertation process. Respondents also indicated that they were 'somewhat satisfied' ($M = 3.27$) with the dissertation process.

Research Question 1

Conclusions and Discussion

Research question 1: How satisfied were doctoral students in educational psychology with the dissertation process?

Participants in this study reported moderate levels of satisfaction with the dissertation process with scores of 3.3 on a scale of 1 to 5. This finding is consistent with existing literature suggesting that doctoral students with higher levels of satisfaction with the doctoral program, courses/instruction, and advisor/faculty are more likely to be satisfied with the overall dissertation process and complete their dissertations and degrees (Faghihi et al., 1999; Lan & Williams, 2005; Lovitts, 1996, 2001, 2008; Mason, 2012; Muszynski, 1988).

Research Question 2

Conclusions and Discussion

Research question 2: Is satisfaction with the dissertation process related to gender?

The independent-samples t-test indicated no gender differences in student satisfaction with the dissertation process. These results suggest that satisfaction with the dissertation process is not related to gender. These findings are consistent with existing literature suggesting no gender differences in student satisfaction in general (Dirkin, Mishra, & Altermatt, 2005; Tessema, Ready, & Malone, 2012; Strayhorn & Saddler, 2009; Witowski, 2008) and no gender differences in student satisfaction with the dissertation process (Dumitrescu, 2016).

An explanation for this finding might be that the satisfaction that students experience in their academic journeys may be traced to their personal experiences with the environmental factors such as their doctoral program, faculty and advisor. Also, student satisfaction may depend on personal levels of perceived efficacy, the challenges they face, and their belief in their own abilities (Pinugu, 2013). Further study is needed to look at these differences.

<div align="center">Research Question 3</div>

Conclusions and Discussion

Research question 3: To what extent is satisfaction related to perceived stress and self-efficacy?

Correlations and multiple regression analysis were conducted to examine the relationship between satisfaction with dissertation process and potential predictors such as perceived stress and self-efficacy. Descriptive statistics and multiple regression analysis results indicate that both perceived stress and self-efficacy are positively and significantly correlated with satisfaction, suggesting that those with high levels of self-efficacy and moderate levels of perceived stress tend to be more satisfied with the dissertation process. Also, regression analysis indicates that the two predictor model accounts for 28% of the variance in satisfaction with the dissertation process. This suggests that doctoral students who report greater levels of self-efficacy and lower or optimal levels of stress are more likely to be satisfied with the dissertation process and complete their dissertations/programs.

Efficacy has been found to be a major predictor of academic satisfaction, and this finding is consistent with the findings of Ojeda et al, (2011) and Pinugu (2013) who

found self-efficacy to be directly linked to academic satisfaction in general, and with the findings of Colvin (2012), Faghihi (1998), Harsch (2008) and Varney (2003, 2010) who found dissertation self-efficacy to be positively related to dissertation progress. Thus, the more an individual perceives himself as capable in addressing specific dissertation tasks, the higher the satisfaction and the more positive his perception toward academic experiences will be.

Generally, researchers found stress to be inversely related to academic performance among traditional undergraduates (Felsten & Wilcox, 1992; Pritchard & Wilson, 2003). However, researchers such as Kaplan and Sadock (2000) have found that an optimal level of stress can enhance learning and studies on graduate students reported moderate to high levels of stress (Bedewy & Gabriel, 2015; Kaufman, 2006; Lazarus & Folkman, 1984; Myers et. al, 2012). On the other hand higher levels of stress have been associated with lower levels of academic satisfaction (Pinugu, 2013).

The combined effects of stress and self-efficacy on satisfaction were studied (Pinugu, 2013) and it has been indicated that self-efficacy and academic stress can predict academic satisfaction. Thus, the finding in this study that satisfaction can be explained by higher levels of self-efficacy and lower levels of stress is consistent with the findings of Pinugu (2013). More specifically, the more confident doctoral students are in their ability to perform specific dissertation tasks (to select a suitable dissertation topic, write a review of the literature and synthesize the literature in the area of study, and formulate the dissertation questions), and the more they can control stressors in their lives (personal life stress, personal difficulties, feelings of anger and nervousness because of things outside of their control) the more satisfied they will be with the dissertation process.

Implications for Practice

The following are a few recommendations and implication for practice that could be made based on the current study.

The present study investigated student satisfaction with the dissertation process in general and indicated that moderate levels of satisfaction have a positive and direct effect on the dissertation process. Prior research indicated that doctoral students who were satisfied with quality of their programs, the quality of instruction, and their relationships with their advisors, were more likely to make progress on their dissertation and complete their degrees. This suggests that universities should strive to maintain high quality of their programs and instruction, and advisors should consider maintaining positive and supportive relationships when assisting doctoral candidates in their dissertation process. Faghihi (1998) indicated that advisee's relationship with their dissertation advisors was significantly related to the advisee's dissertation progress. Also, graduate program directors and administrators could check with their students annually to assess the students' feelings of satisfaction with their respective programs and advisors.

The findings indicating that dissertation self-efficacy and perceived stress directly and positively impact satisfaction with the dissertation process suggests that the student and the institution should collaborate to increase doctoral candidates' levels of self-efficacy (in addition to doctoral candidates' necessary skills and knowledge) and to provide support and recommendations to students on how they could maintain optimal levels of stress and reduce negative stress (personal life stress, personal difficulties, feelings of anger and nervousness because of things outside of their control). Advisors could monitor doctoral students with high levels of stress and anxiety, and provide them

with support and resources. The implications for satisfaction with the dissertation process and program completion could be: maintaining program quality, adequate instruction, positive and supportive relationships with the advisors. Additionally, given the relationship between self-efficacy and perceived stress with student satisfaction with the dissertation process, universities should also offer programs and services that would enhance self-efficacy of students and lessen their academic stress in order to guarantee their academic satisfaction (Pinugu, 2013).

Implications for Future Research

The findings of this study suggest that perceived stress and self-efficacy play an important role in the satisfaction with the dissertation process. Future research could focus on the longitudinal aspects of perceived stress and dissertation self-efficacy and how they influence the dissertation process.

The concept of student satisfaction with the dissertation process would benefit from qualitative research (students' thoughts, feelings, behaviors) in order to shed more light on the impact of the different factors involved in students' satisfaction which ultimately play a central role in dissertation/program completion.

APPENDIX

SURVEY

SURVEY COVER LETTER

About the survey

You are invited to participate in a research study. The purpose of this study is to determine the role of self-efficacy and perceived stress on satisfaction with the dissertation process. I anticipate the results to provide suggestions for decreasing doctoral attrition and increasing dissertation completion rates.
This survey has four sections and is expected to take 10-15 minutes to complete. To participate in this study, you must be a PhD/EdD candidate (completed all course requirements BUT dissertation) in the field of Educational Psychology (general educational psychology, human development or developmental psychology, cognitive psychology, behavioral neuroscience, learning and behavior, school psychology, special education, psychometric methods) or a PhD/EdD graduate who has competed a degree in Educational Psychology within the last 5 years.
We do not anticipate any risks associated with this study. Your responses will be kept strictly confidential. No identifiable information about you will be collected.
If you have questions at any time about the study of the procedures, you may contact the researcher, Gabriela Dumitrescu at 269-471-6223, gabriela@andrews.edu, or Dr Elvin Gabriel at 269-471-6223, gabriel@andrews.edu.
Your participation in this study is voluntary; you may refuse to participate without penalty.

- ☐ Informed Consent:
  By checking this box, I am indicating that I am voluntarily participating in this study. I understand that the information gathered in this study will be kept completely confidential and that no references will be made in written or oral materials that could link me personally to this study.

SURVEY

1. In what year were you born? (enter 4-digit birth year; for example, 1976)

   _____

2. What is your gender?
   - ☐ Female
   - ☐ Male

3. What is your current residence status?
   - ☐ On campus
   - ☐ Off campus/community
   - ☐ Out of state
   - ☐ Out of the country

4. Which of the following best describe the emphasis of your doctoral program in educational psychology?
□ General Educational Psychology
□ Human Development
□ Developmental Psychology
□ Cognitive Psychology
□ Behavioral Psychology
□ Learning and Behavior
□ School Psychology
□ Special Education
□ Psychometric Methods
□ Research and Evaluation
□ Other Psychology Emphasis _____

5. Which statement most accurately describes your employment status during the majority of your doctoral studies?
□ Employed full time
□ Employed part time
□ Not employed

6. Which best describes your current status in your doctoral program?
□ Still doing course work
□ Completed required coursework
□ Preparing to take comprehensive exams
□ Completed comprehensive exams
□ Writing dissertation proposal
□ Dissertation proposal approved
□ On leave, but planning to return soon
□ Withdrew from the program and have no plans to return
□ Received my doctoral degree (indicate what year) _____

7. Which best describes your current dissertation status?
□ Deciding upon a topic
□ Writing the chapters for proposal
□ Proposal approved, not collecting data
□ Proposal approved, collecting data
□ Analyzing data
□ Writing the final dissertation chapters
□ Successfully defended the dissertation
□ Dissertation submitted and approved by Graduate Services office

8. Please provide the month and year you reached All But Dissertation (ABD) status (e.g. completion of all program requirements except the dissertation)
   Month _____   Year _____

9. Rate to what degree you are/were financially secure during the dissertation process.
   - ☐ Not at all secure
   - ☐ Minimally secure
   - ☐ Somewhat secure
   - ☐ Moderately secure
   - ☐ Completely secure

10. Rate the degree of emotional support you receive/received from your dissertation advisor during the dissertation process.
    - ☐ None
    - ☐ Below average
    - ☐ Average
    - ☐ Above average
    - ☐ Exceptional

11. How would you describe the structural tasks involved in the dissertation process?

5	4	3	2	1	0
Completely Overwhelming	Moderately Overwhelming	Somewhat Overwhelming	Minimally Overwhelming	Not at all Overwhelming	Does not apply

   - ☐ Choosing the topic
   - ☐ Selecting your committee
   - ☐ Writing the proposal
   - ☐ Getting institutional review board approval
   - ☐ Collecting the literature review
   - ☐ Collecting the data
   - ☐ Analyzing the data
   - ☐ Writing the chapters
   - ☐ Defending the dissertation

12. How satisfied are/were you with the dissertation process?
    - ☐ Not at all satisfied
    - ☐ Minimally satisfied
    - ☐ Somewhat satisfied
    - ☐ Moderately satisfied
    - ☐ Completely satisfied

13. From date of admission, what is the time limit in completing the doctoral program at your university or academic institution?
- ☐ 4 years
- ☐ 5 years
- ☐ 6 years
- ☐ 7 years
- ☐ 8 years
- ☐ 9 years
- ☐ 10 years
- ☐ Not time limit

14. During your program certain critical stressful events may have occurred. To what extent is the following affecting or has affected the completion of your doctoral program?

1 No Influence	2	3	4	5	6 Great Influence

- ☐ Family/marital problems
- ☐ Family health problems
- ☐ Personal health problems
- ☐ Pregnancy in family
- ☐ Financial problems
- ☐ Work pressures
- ☐ Academic pressures
- ☐ General discouragement
- ☐ Required comprehensive examinations
- ☐ Program time requirements
- ☐ Other please specify _____

15. Each task below is related to successfully writing a dissertation. Rate how confident you are in your ability to successfully accomplish each of the following tasks.

0 No Confidence Al all	1	2	3	4	5	6	7	8	9	10 Complete Confidence

1. Select a suitable dissertation topic for study.
2. Effectively select the appropriate statistical methodology or qualitative analysis to answer your research question.
3. Write the Introduction for the dissertation proposal.
4. Effectively run/apply the appropriate statistical or qualitative analyses to answer your research question.
5. Write the Discussion section for the dissertation.
6. Collect adequate dissertation data records or field notes.
7. Select an appropriate research design for your dissertation.

8. In order to effectively write a Review of the Literature, review and synthesize the scholarly literature in your area of study.
9. Obtain assistance from other researchers in your topic area.
10. Write the Methodology section of the proposal.
11. Write the Results section of the dissertation.
12. Effectively work with your doctoral committee/chair/mentor for needed help and support.
13. Effectively interpret the results obtained from statistical analyses (quantitative) or content analyses (qualitative)
14. Effectively use simple quantitative statistics (eg., frequency distribution, correlation, t-test, etc.) or simple qualitative analysis such as coding.
15. Formulate a dissertation research question or statement.
16. Operationalize dissertation variables and/or questions.

16. For each of the following dissertation tasks, indicate your impression of the CURRENT state where responsibility rests.

1	2	3	4	5	6	7
Student						University

1. Responsibility for progression through the dissertation.
2. Responsibility for scheduling student-advisor meetings.
3. Responsibility for locating and acquiring relevant research materials relating to the dissertation topic.
4. Responsibility for selecting a dissertation topic.
5. Responsibility for submitting a protection of human subjects application.
6. Responsibility for filling documents for graduation with the university graduate office.
7. Responsibility for locating subjects (or sources) to provide data for the study.
8. Responsibility for analyzing the dissertation data.
9. Responsibility for analyzing the dissertation data.
10. Responsibility for interpreting the data.
11. Responsibility for writing the chapters for the dissertation.
12. Responsibility for evaluating the presentation style of the chapters.
13. Responsibility for contacting experts whose background may contribute to the dissertation.
14. Responsibility for scheduling the pace and time for completing the dissertation.
15. Responsibility for evaluating the content of the dissertation.
16. Responsibility for developing research tools (computer, library, etc).

17. For each of the following dissertation tasks, indicate your impression of the SHOULD state where responsibility rests.

1	2	3	4	5	6	7
Student						University

1. Responsibility for progression through the dissertation.
2. Responsibility for scheduling student-advisor meetings.
3. Responsibility for locating and acquiring relevant research materials relating to the dissertation topic.
4. Responsibility for selecting a dissertation topic.
5. Responsibility for submitting a protection of human subjects application.
6. Responsibility for filling documents for graduation with the university graduate office.
7. Responsibility for locating subjects (or sources) to provide data for the study.
8. Responsibility for analyzing the dissertation data.
9. Responsibility for analyzing the dissertation data.
10. Responsibility for interpreting the data.
11. Responsibility for writing the chapters for the dissertation.
12. Responsibility for evaluating the presentation style of the chapters.
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15. Responsibility for evaluating the content of the dissertation.
16. Responsibility for developing research tools (computer, library, etc).

17. Responsibility for scheduling the pace and time for completing the dissertation.
18. Responsibility for evaluating the content of the dissertation.
19. Responsibility for developing research tools (computer, library, etc).

18. The questions on this page ask you about your feelings and thoughts during your dissertation process. In each case, you will be asked to indicate how often you felt or thought a certain way.

1 Never	2 Almost never	3 Sometimes	4 Fairly often	5 Very often

1. During the dissertation process, how often have you been upset because of something that happened unexpectedly?
2. During the dissertation process, how often have you felt that you were unable to control the important things in your life?
3. During the dissertation process, how often have you felt nervous and stressed?
4. During the dissertation process, how often have you felt confident about your ability to handle your personal problems?
5. During the dissertation process, how often have you felt that things were going your way?

6. During the dissertation process, how often have you found that you could not cope with all the things that you had to do?
7. During the dissertation process, how often have you been able to control irritations in your life?
8. During the dissertation process, how often have you felt that you were on top of things?
9. During the dissertation process, how often have you been angered because of things that were outside of your control?
10. During the dissertation process, how often have you felt difficulties were piling up so high that you could not overcome them?

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