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Dissertation Mentor Communication Style and Behavior as Predictors of Student Stress and Satisfaction

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Walden University

College of Social and Behavioral Sciences

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Julienne King

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Walden University
2019

Abstract

Dissertation Mentor Communication Style and Behavior
as Predictors of Student Stress and Satisfaction

by

Julienne King

MBA, University of Phoenix, 2007

BS, Southern University A & M College, 2001

Dissertation Submitted in Partial Fulfillment of the Requirements for the

Degree of Doctor of Philosophy

Psychology

Walden University

May 2019

Abstract

Many graduate students (60%) do not complete their program of study. It is important for universities to find ways to increase student completion rate. The general problem is that online U.S. universities are faced with a high rate of PhD student drop out resulting in an increased number of students not being able to complete their doctoral studies. The purpose of this multiple linear regression study was to identify predictor variables of dissertation student stress and overall dissertation satisfaction. Deci and Ryan's self-determination theory and Lazarus' theory of cognitive appraisal were used to guide this research to identify how student perception of mentor communication styles can be used to predict how students appraise stress and overall satisfaction with dissertation. A convenience sample of 178 dissertation students identified through several online dissertation student support and student-led Facebook groups completed the online survey. According to study results, student perception of questioning and preciseness as mentor communication styles predicted significantly lower scores of student appraisal of stress experienced in dissertation. However, student perception of verbal aggressiveness as a mentor communication style predicted significantly higher scores of student stress. Mentor behaviors of academic assistance, mentoring abilities, and personal connection predicted significantly higher levels of overall student dissertation satisfaction. Positive social change initiatives formed by faculty and staff can be made to educate dissertation chairpersons about the communication style and behaviors that are the most effective in mentoring dissertation students.

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Dedication

I would like to dedication this to my Heavenly Father- Almighty God, my spiritual father- Pastor Adetokunbo Obasa, and to my darling daughters, Zowie and Lan'e. It is only by God's grace and mercy. I am truly grateful. Through the love of God, I have learned that God never gives up on your dreams if you let Him guide you. I learned many lessons in this process about patience, excellency, and working with others. This has refined me to say the least. I am truly blessed. Through the loving kindness of my Pastor, Pastor Obasa, he has been a coach when I wanted to quit, a father who continued to remind me that the best was within reach, and a counselor that encouraged me through scripture that the strength I needed was available to help me achieve all things before me. It is a blessing to have someone who truly believes in you. Through the patience and love of my daughters, I have learned to appreciate them for all of the sacrifices they have made to give up their "mom time" in exchange to give mom her "study time". I have learned to celebrate the process and not wait for the finale`. I am truly loved. Girls, for your patience and unconditional love, Mommy says thank you. I pray that every sacrifice you have made for me, God will honor You. By His grace, we will enjoy this new chapter. Pastor, thank you for encouraging me with text messages, prayers, conversations filled with scripture and your uplifting Words of encouragement. Father in Heaven, God, thank You for trusting me with pressure. You knew that I would do well. I honor You, Sir. With sincere appreciation, I dedicate this work to you. Thank you. I love you.

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Chapter 1: Introduction to the Study

Although more universities are offering distance learning programs to reach more students, student drop out is still a problem for university programs, and attrition rates are not decreasing (Cassuto, 2013). Kelley and Salisbury-Glennon (2016) estimated that 60% of students do not complete their dissertations. Students have spent large amounts of time progressing through courses offered by the university only to separate during the final phase of degree completion, which is writing his/her dissertation (Cassuto, 2013).

Mentoring may make a difference in both academic and professional success (Khan & Gogos, 2013). Mentoring has a positive impact on the personal and professional development of students, and it is positively linked to student retention (Campbell & Campbell, 1997). In one study where college students were coached, Bettinger and Baker (2011) found a 13% higher completion rate than college students who were not coached.

Lechuga (2011) found that effective mentoring prepares doctoral students to assume their role within the profession by allowing students to add their expertise and experiences that extends the life of the profession for all professionals in the field. However, ineffective mentor-mentee relationships have shortened the life of the profession because those students who were supposed to enter the profession did not, and the skills taught, the efforts invested, and the knowledge obtained were never filtered back into the profession to rejuvenate the field for longevity (Lechuga, 2011). Ineffective mentor-mentee relationships are created by the lack of student interaction with their mentor, lack of mentor trust, and lack of intellectual support from their mentor (Golde, 2005). Student attrition was linked to unsatisfying and highly stressful mentor-mentee

relationships (Craft, Augustine-Shaw, Fairbanks, & Adams-Wright, 2016). However, scholars have not examined how aspects of mentoring, such as communication style and behavior, affect student stress and overall satisfaction.

The goal of this study was to investigate student perception of mentor communication style and mentor behavior as predictors of dissertation student stress and satisfaction. For U.S. educational institutions offering distance learning to remain competitive, they must create and enhance a learning environment in which mentors and staff develop the most effective and appropriate communication style and behavior designed to help all doctoral students successfully complete their PhD program. With the average cost of attaining a PhD degree at an estimated cost of \$36,000 or more per year (depending on the number of years to finish, out of state expenses, as well as international student cost), most PhD students will not graduate (National Center for Education Statistics (NCES), 2011). This study could be used to improve dissertation mentor-mentee relationships helping more students to complete their dissertation, thus lowering student attrition. Studying the variables of mentor communication styles and mentor behavior could lead to improvements in the mentor-mentee relationship that will improve the dissertation experience for the student. The results from this study will provide university faculty and staff with feedback of how dissertation mentor communication styles and mentor behavior affect student stress and overall satisfaction of the dissertation experience. University faculty and staff can help students understand some of the sources of their stress and how to adjust without jeopardizing the relationship between them and their dissertation chair or forfeiting their efforts taken in the PhD

program. Institutions and dissertation chairs/mentors may be able to use this information to make changes to mentor preparation and training to increase student academic achievement and degree completion.

In Chapter 1, I review the background of the study and explain the problem statement. The research questions are listed, along with the theoretical framework and nature of the study, which is discussed in more detail in Chapters 2 and 3. This chapter concludes with a discussion of the limitations and significance of the study.

Background

Some faculty and staff attribute student attrition to the student's lack of self-determination to complete started endeavors with tenacity and commitment (Erichsen, Bolliger, & Halupa, 2014). However, some students attribute their attrition, their all but dissertation (ABD) status, or the reason of program or university separation due to the lack of dissertation mentor communication or their mentor's ineffective communication as well as lack of support (Harrison, Gemmell, & Reed, 2014). In response to the negative experience with their dissertation chair, some doctoral students experienced a delay in program completion by taking longer to complete the dissertation, or students changed their mentors/chairperson, thus restarting the process of relationship building that includes the learning of new personalities, the understanding of differently expressed expectations, and adjusting to the differences in guidance and mentoring practices (Wao, Dedrick, & Ferron, 2011). Students who separated from the program of study may not achieve the goal in which they intended to complete or complete in a timely manner. Students' loss of time and money can never be regained; efforts are wasted; and the

university has lost potential professionals, time, resources, and invested finances (Harrison et al., 2014).

Harrison et al. (2014) found that there was a need to provide a supportive environment that promoted effective communication between faculty and students. Effective strategies for online doctoral faculty-student relationships include the supervisor's apt, effective, and proactive communication in outlining the process of dissertation as well as a timeline with accountability measures. Effective communication also includes a clarification of the supervisor's role; a display of the appropriate application of critical questioning and probing; and clear, substantive, and timely feedback that helps students set goals (Harrison et al., 2014). The supervisor should also encourage, praise, support, and provide examples of work with clear guidelines for the research process (Erichsen et al., 2014).

Fernando (2013) found that doctoral students who were satisfied with their dissertation experience believed that their dissertation chair created a supportive environment that nurtured their writing skills in the writing process. These students also believed that their dissertation chairs behaved in such a way that a working alliance and meaningful rapport was established (Fernando, 2013). Neale-McFall and Ward (2015) found that a student's perception of his or her ability to collaborate with his or her chairperson also influenced overall satisfaction. When students perceived mentoring to be effective from their dissertation chair, student self-efficacy increased (Varney, 2010). However, if the learner had different expectations than that of the dissertation mentor, then a disconnection occurred, and that disconnection affected the learner's satisfaction

with the process of mentoring and the process of completing online dissertation (Andrews, 2016). Universities may need to explore ways to provide balance between the performance expectations of the mentor and the mentee. As active mentoring takes places, not only will balance between expectations of mentors and mentees become defined and aligned, but there will be an increase in student completion rates in graduate doctoral programs (Smith, Maroney, Nelson, Abel, & Abel, 2006).

Mentoring has an impact on student success, student retention, and student stress. Kayama et al. (2016) concluded that mentoring fostered research productivity and had a positive impact on the production of new knowledge giving scholarship purpose to both the mentor and mentee. Lechuga (2011) found that mentors perceived their role as the individual responsible for ensuring that academic guidance was provided and that students were academically prepared. Rademaker, O'Connor Duffy, Wetzler, and Zaikina-Montgomery (2016) explored online dissertation chairs' perceptions of trust in the mentor–mentee relationship and found that trust was a crucial determinant of doctoral student success. Rademaker et al. concluded that it was important for chairs to establish trust through feedback, consistency, and personal connections with students. Black (2017) described the role of E-mentors as the individual who provides training, coaching, advice, and structure to increase engagement through the online dissertation phase of doctoral education. Dissertation chairpersons guide the doctoral candidate through the process of dissertation by exhibiting genuineness; being knowledgeable; creating a climate of trust and connectedness; and demonstrating a willingness to exhibit, demonstrate, and model personal and professional ethic (Black, 2017). The qualities are

usually associated with communication and behavior. Therefore, the focus of this study was on exploring how the aspects of mentoring, such as student perception of mentor communication style and mentor behavior, affected student success, retention, and stress. Because there was little research on factors of mentoring, such as mentor communication style and mentor behavior, I explored if student perception of mentor communication style and mentor behavior can be used to predict student stress as well as overall dissertation satisfaction. I addressed student perception of dissertation mentor communication style and behavior as predictors of student satisfaction and stress.

This study added to the existing literature of mentoring doctoral students by providing research on the aspects of mentor communication style and mentor behavior to understand if these predicted dissertation student stress and satisfaction. When designing distance learning programs, U.S. universities often lack an effective mentoring model that impact students' perception of dissertation mentoring communication between students and their mentors. In this study, I examined how student perception of mentor communication style and mentor behavior affected how students appraised their dissertation stress and how they rated their overall dissertation satisfaction. This was done through the surveying of current PhD students in an online university to gain an understanding of their perception of how their dissertation chairs' communication style and behavior affected their appraisal of stress and overall satisfaction. Using the focus of extrinsic motivational factors in the self-determination theory (i.e., mentor communication style and mentor behavior), I determined whether there was a connection between student perception of their mentors' communication style and behavior and how

it affected their cognitive appraisal of dissertation stress and their overall dissertation satisfaction. With the rising cost of tuition, the time dedicated and devoted to course study and dissertation writing, and because over 60% of PhD students do not graduate, there was a need to understand what factors contributed to student retention and the completion of dissertation (Council of Graduate Schools, 2009).

Problem Statement

The overall completion rate for doctoral students 10 years (1993-2003) after they began their doctoral programs was 56.6% (Sowell, Ting, & Bell, 2008). Sixty-five percent of students across all disciplines reported that mentoring/advising was a main problem to Ph.D. completion (Council of Graduate Schools, 2009). The mentor's lack of support, communication about the expectations of the process, and direction given to help the students complete their PhD were identified as problems that hindered student PhD completion (Herman, 2011). These negative experiences can cause the dissertation student to become stressed, experience isolation, and possibly separate from the program of study due to a lack of balance between the normality of his or her day-to-day routines and the demands of the doctoral program (Silinda & Brubacher, 2016). The perception of how information was communicated, and the behaviors displayed. can have an impact on motivating students to succeed as well as creating balance to handle the stress experienced by a dissertation student while writing his/her dissertation. In this study, I determined whether student perception of mentor communication and mentor behavior can be studied from the perspective of predictors of student appraisal of stress and overall student satisfaction while in dissertation.

Faculty members have reported that there is a discrepancy of expectations between their expectations of the student and the students' expectations of them as faculty members (Burkard et al. 2014). Faculty members saw dissertation as an opportunity to refine students' research skills and impart new ones while students saw the dissertation as the last hurdle to gaining a credential (Brause, 2001). Faculty members wanted students to think freely (i.e., insert creativity, be independent in their thinking, and stand on a position taken in their research) as well as follow recommended suggestions (i.e., follow template designs, relinquish control over writing style or topics, and trust the guidance of the mentor) (Brause, 2001). Mentors or dissertation chairs also have the challenge of creating a learning environment that will help all doctoral students reach the end of the dissertation in a timely manner, regardless of student entry level of research skills (Lim, Dannels, & Watkins, 2008). There is a lack research on the mentoring skills needed to produce more PhD graduates. There is a gap in literature about how mentor communication style and mentor behavior influence students' stress and overall satisfaction in PhD programs. This research gave insight regarding the relationship between student perception of his/her mentor's communication styles and mentor behavior to student stress and overall dissertation satisfaction.

Purpose of the Study

The purpose of this research was to determine if students' perception of mentor communication style and mentor behavior can be used as predictors of student stress and overall dissertation satisfaction. In this quantitative study, I focused on evaluating data collected from students enrolled in dissertation courses in online universities. Data

analysis included student perception of mentor communication styles and mentor behavior and how it affected their cognitive appraisal of stress experienced during dissertation as well as their overall satisfaction with the dissertation process. I looked at student perception of the following mentor communication styles: expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness. Dissertation mentor behaviors included personal connection, work style, mentoring abilities, academic assistance, and professional development. The dependent variables were student appraisal of dissertation stress and overall satisfaction of the dissertation process. The independent variables were student perceived behaviors and perceived communication styles of their dissertation mentor.

Research Questions

Research Question 1: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness), as measured by the Communication Styles Inventory (CSI; De Vries et. al., 2013) relate to dissertation student stress (threat, challenge, harm, benign), as measured by the Cognitive Appraisal for Dissertation Scale (CASS; Devonport & Lane, 2006)?

*H*₀1: Mentor communication style is not a significant predictor of dissertation student stress.

*H*₁1: Mentor communication style is a significant predictor of dissertation student stress.

Research Question 2: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness), as measured by the CSI (De Vries et. al., 2013) relate to dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015)?

H₀2: Mentor communication style is not significant predictor of dissertation student satisfaction.

H₁2: Mentor communication style is a significant predictor of dissertation student satisfaction.

Research Question 3: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development), as measured by the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to dissertation student stress, as measured by the Cognitive Appraisal for Dissertation Scale(CASS; Devonport & Lane, 2006)?

H₀3: Dissertation chairperson behavior is not significant predictor of student stress.

H₁3: Dissertation chairperson behavior is a significant predictor of student stress.

Research Question 4: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development), as measured by the Dissertation Chair

Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to the overall dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument?

H₀₄: Dissertation chairperson behavior is not significant predictor of overall student satisfaction.

H₁₄: Dissertation chairperson behavior is a significant predictor of overall student satisfaction.

The six communication styles measured were expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness. The five mentor behaviors measured were work style, personal connection, academic assistance, mentoring abilities, and professional development. Multiple regression analysis was used to determine the relative strength of mentor communication styles and behaviors in predicting dissertation student stress and satisfaction.

Theoretical Framework

This research was based on two theories: cognitive appraisal theory and the self-determination theory. Cognitive appraisal theory was first published by Lazarus and Folkman (1984) and then later, the theory was further developed by Lazarus (1991) into the current theory that is being used as part of the framework for this study. Cognitive appraisal theory was developed to define the process in which individuals construct meaning or significance of events that create destabilizing effects in their own standard of well-being equilibrium (Lazarus & Folkman, 1984). According to the cognitive appraisal theory, if a person appraised his or her relationship to the environment in a certain way

(e.g., as facing uncertain threat), then an emotion associated with the appraisal pattern (e.g., anxiety) will follow (So, Kuang, & Cho, 2016). I used the cognitive appraisal to look at which mentor communication styles and mentor behaviors students perceived as stressful and how their perceptions affected their being satisfied with the dissertation process. Cognitive appraisal theory is an individual's subjective evaluation of the amount of experienced distress (Folkman, 2008).

Two types of appraisal are primary and secondary appraisal (Roesch & Rowley, 2005). Primary appraisal is the appraisal of the stressful event based on three categories of (a) potential harm, (b) threat, and (c) challenge to the individuals' values, goals, and beliefs (Folkman, 2008). Secondary appraisal is the appraisal of a stressful event based on the individual's resources or talents needed to successfully and adequately cope with the situation or overcome harm (Largo-Wight, Peterson, & Chen, 2005). The individual then decides which kind of coping resources are needed, as well as the availability or accessibility to these resources to apply to the event (Kennedy, Evans, & Sandhu, 2009). The three dimensions of secondary appraisal process are (a) controllable-by-self (the ability to overcome distress by oneself), (b) controllable-by-others (the ability to overcome stress with the help of other individuals), and (c) uncontrollable-by-anyone (the sense of reduced control or no control over the situation) (Peacock & Wong, 1990). If the individual secondarily appraises the situation as uncontrollable by anyone because he or she feels abandoned by his or her dissertation chair and the individual does not understand how to overcome distress by themselves, what could be primarily appraised as a challenge is now appraised as a threat to the wellbeing of the individual. Cognitive

appraisal, and the meanings derived from them, are relational to the stress experienced during dissertation and the relationship between the mentor and mentee, thus leading to satisfaction of the relationship as well as dissertation completion (Frydenberg, 2002).

Self-determination theory is proposed as an individual's inherent need to be autonomous both in internal self-relations and self-relations with others (Deci & Ryan, 1985). Autonomy is achieved in two ways: intrinsic motivation (internal self-relations), which refers to the level of engagement in an activity due to interest and enjoyability, and extrinsic motivation (self-relation with others), which refers to the level of engagement in an activity due to the attainment of rewards or the avoidance of social pressures (Ryan & Deci, 2000). The level of interest of an individual in an activity is the driving force that intrinsically motivates the individual to accomplish or complete a task (Russo & Stattin, 2017). Individuals are also extrinsically motivated to accomplish tasks or activities by the relations that they have with others. Through relationships with others, an individual gain an understanding of how to achieve an outcome and set forth actions to accomplish a goal (Deci, Vallerand, & Pelletier, 1991). Deci and Ryan (1985) identified three different types of extrinsic motivation: introjected, identified, and integrated. The self-determination theory was applied to this study to examine the extrinsic motivating factors of the self-determination theory that included introjection, identification, and integration. I found how the extrinsic motivational factor of dissertation chairperson impacted student stress and overall student satisfaction by the way the chair's communication style and behavior were perceived by his or her students.

Nature of the Study

The nature of the study was quantitative with a nonexperimental design. Student perception of dissertation chairperson/mentor communication style and dissertation chairperson/mentor behavior were used as predictors of dissertation student stress and dissertation student satisfaction. I used online doctoral students as a convenience sample. The students completed a modified version of the CSI (De Vries et. al., 2013), the CASS (Devonport & Lane, 2006), and the Dissertation Chair Satisfaction Survey (Neale-McFall & Ward, 2015). The modified version of CSI measured the independent variable (student perception of dissertation chairperson/mentor communication style), the CASS measured the dependent variable (student stress), and the Dissertation Chair Satisfaction Survey Instrument measured the second independent variable (student perception of mentor behavior) as well as the second dependent variable (overall student satisfaction) using a single item question on the survey. Multiple regression was used to test the hypotheses.

Definitions

The following represented the operational definitions of the terms used in this study.

All but dissertation (ABD): The definition or description of a student who has completed all coursework and, if applicable, passed comprehensive exams but has not completed and defended the doctoral thesis or dissertation.

Autonomy support: The interpersonal behavior that teachers offer during instruction to detect, develop, and shape students' inner motivational resources (Deci & Ryan, 1985).

Chairperson: A faculty member of the university that works with the dissertation student and has the primary responsibility of assuring that the work of the committee effectively fulfills both the expectations of service to the student and service to the academic discipline(s) and professional field(s) of practice involved (Walden University, 2011).

Chairperson behavior style: The nature of interactions between mentor and mentee; the types of activities they do together; the mentee's feelings of emotional closeness, trust, and support; and/or the mentee's engagement in the mentoring relationship (Brodeur, Larose, Tarabulsky, Feng, & Forget-Dubois, 2015).

Cognitive appraisal. The meaning that individuals gave to an experience or the level of importance or priority or the level of awareness that the individual assesses deviation from normal functioning (Folkman, 1982; Parker & De Cotiis, 1983).

Communication style: The way a leader conveys verbal, paraverbal, and nonverbal signals in managerial disposition or posture and how these signals are interpreted by the mentee (Luo, Song, Gebert, Zhang, & Feng, 2016).

Dissertation: Writing characterized by the attainment and distribution of multilevel and complex skill set including (a) research, acquisition, and application of subject-specific knowledge and disciplinary-specific practices in methodologies/evaluation on a student chosen dissertation topic as well as (b) the development of the dissertation using research skills, such as critical analysis, critical reading, extended writing, and time and project management (Dimitrova & O'Rourke, 2011).

Dissertation stress: Internal negative physical, mental, and emotional response to the range of dissertation tasks like upcoming deadlines for a dissertation chapter that would cause a physiological and emotional reaction inside a person to react with anxiety and restlessness (Devonport & Lane, 2006).

e-Mentors: Mentors who provide learning opportunities to the student or mentee as well as provide advising while giving encouragement and to some extent modeling all computer-based activities (Bierema & Merriam, 2002, p. 214). E-mentors are aware of the importance of implementing and delivering continuous and developmental learning and bring support to foster life-long learning all via online (Andrews, 2016).

E-learning: Learning facilitated and supported with information and communications technology (Harrison et al., 2014).

Mentor: Advisors, coaches, instructors, and advocates who have a distinct skill used to cultivate future leaders in a given field or area of expertise (Gotian, 2016).

Mentoring: The relationship between a mentor, a more experienced person who provides support and guidance to a less experienced person referred to as a protégé (Kram, 1985).

Stress: When a person assesses his/her interaction with a situation and concludes that the interaction exceeds that person's resources to maintain a level of comfort that is endangering to his/her wellbeing (Dewe, 1991).

Assumptions

There were several assumptions that impacted this study. The first assumption was that the participants described their experience of being mentored accurately and honestly. It was assumed that participants contextually understood each question posed and responded accordingly. It was assumed that the participants completing the survey carefully read and understood the items as written and that their answers reflected what the item intended to measure. Another assumption was that the online characteristics of adult online students who participated in the survey were like that all adult distance learning students in all online universities. These generalized characteristics were summarized as students over 24-years-old, have families, and work part-time or fulltime (Osam, Bergman, & Cumberland, 2017).

It was also assumed that the instruments for each variable denoted in each research question (the modified CSI- student perception of mentor communication style, the CASS- dissertation student stress, and the Dissertation Chair Satisfaction Survey- student perception of mentor behavior) measured what each intended to measure.

Scope and Delimitations

The scope of this study was focused on determining how students' perception of their dissertation chair's/ mentor's communication style and behavior predicted student stress and overall dissertation satisfaction in a distance learning environment. Although there was research about how mentoring affected student stress and satisfaction, especially that of PhD students, I looked at student perception of mentor communication style and behavior as factors of influence on student stress and overall satisfaction. Ultimately, the goal was to better understand how to increase student satisfaction,

decrease student stress, and increase student degree completion, which were all factors that were influenced by the dissertation chair.

When looking at the aspects of any relationship, communication is the vehicle that drives trust, conveys what is expected, assists in a time of need or struggle, and demonstrates appropriate behaviors (Herman, 2011). In mentor-mentee relationships, how information is communicated (communication style) also establishes trust, gives an interpretation of expectations, and coaches students to achieve goals to accomplish a certain task (Herman, 2011; Muñoz & Ramirez, 2015; Yang, Orrego Dunleavy, & Phillips, 2016). The mentor's behavior not only helps the student to achieve goals towards accomplishment but models to that student behaviors characteristic of professionals in the field (Herman, 2011; Muñoz & Ramirez, 2015; Yang et al., 2016).

Focusing on interactions between mentor and mentee allowed research to be done that will further develop the study of the dynamics of mentor-mentee relationships, in this case dissertation students and their chairs. This research gave a better understanding of the relationship shared between dissertation chairperson/mentor and dissertation student/mentee and will allow the incorporation of possible methods to improve mentoring effectiveness. Improving the effectiveness of mentoring may influence overall student satisfaction by lowering student stress. Improving the effectiveness of mentoring also may lower the rate of student attrition or separation in graduate programs by positively influencing student satisfaction (Neale-McFall & Ward, 2015; Smith et al., 2006).

The study only included students who had completed at least 2 quarters of dissertation coursework. According to Kram's (1983) phases of mentorship, students who have completed at least 2 quarters with the same dissertation chair have moved into the more developed phase of mentoring in which the nature of the mentoring relationship has been established. Participants of the study included students who had had the same mentor or dissertation chair for at least 2 or more quarters. Newly enrolled students in dissertation courses and students who had not had the same dissertation chair for at least 2 quarters were not eligible to participate in this study. Because of the diversity of the student population of the university, it was believed that sampling from this population, even with the exclusions, offered enough variability that this study was generalizable to all dissertation students.

Limitations

One of the most important threats to validity to consider was the sampling of participants. The method of sampling was nonrandom sampling from a convenient source. This method of sampling was a threat to validity because nonrandom samples have weaker external validity compared to random samples (Trochim & Donnelly, 2008). An attempt was made to collect data from a wide range of disciplines, ethnicities, ages, and genders so that the data were generalizable. Generalizability added external validity by representing participants who were not included in the study to cancel or create balance of threats to validity posed by nonrandom sampling (Trochim & Donnelly, 2008). Another sampling threat was that I only had access to students from online Facebook groups at various universities. All information about mentoring of online

dissertation students only came from the practices used from students that were on one social media website.

One internal threat to validity was that participants may not be truthful in answering questions about their dissertation chair. If the student had some changes in his/her dissertation chair or have just reached the 2nd quarter mark with his/her dissertation chair and have newly developed trust with the current dissertation chair, students may not want to jeopardize that relationship for the sake of research inquiry. If the student was satisfied with his/her dissertation chair, he/she may answer all questions that may impose a negative connotation towards his or her chair in suitable manner that highlights only the strengths and positive aspects of his or her dissertation chair. If the student was not satisfied with his/her dissertation chair, he/she may not be apt to answer questions truthfully; therefore, the data will be biased and invalid based on feelings and emotions of the student and not the student answering the question in an objective manner. Student participants may not have fully understood the role of the dissertation chair and, therefore, responded from the framework of those misrepresentations. Another internal threat to validity was that this study was not a true measure of mentor communication style and mentor behavior but what the students perceived about their mentors' communication style and behavior. As with perception of any kind, that information is diverse in interpretation and the data collected cannot be used to precisely measure dissertation communication style.

Reliability and validity of two of the survey instruments (Dissertation Chairperson Satisfaction Survey and the CASS) posed another limitation and threat to validity.

Because the intent of the research for the Dissertation Chairperson Satisfaction Survey was to explore variables that are influential in predicting counseling doctoral students' overall satisfaction with their chairperson, the developer of the research instrument did not establish the psychometric properties of the instrument (Neale-McFall, 2011). Also, the CASS was a modified version of the Cognitive Appraisal of Health Scale, so the author relied on the validation and reliability of the original scale (Devonport & Lane, 2006).

Another threat to validity lied within the research method of this study. Although multiple regression may reveal relationships among variables, it cannot be implied that the variables are causal (Spice, 2005). It was sometimes difficult to draw causal relationships in quasi-experimental designs, such as correlational designs (Tabachnick & Fidell, 2013). Although I found that mentor communication style and mentor behavior were predictors of dissertation student stress and satisfaction, the findings did not validate the conclusion that they were causal variables. A final threat to validity to consider was that there were multiple sources of stress (i.e., family, finances, professional isolation, fatigue, or academic frustrations of not completing in the time expected or not progressing forward at any point in their writing) during dissertation. The singular source of mentors, while important, was not the only factor that predicted student stress and student satisfaction. It should be noted that although I was a dissertation student, I did not believe that there would be any personal biases to consider. I did not have any interaction with the participants because the survey was anonymous. The survey description and link were placed in the university's participant pool, and participants registered for a user id

different from their student id. The survey link was also placed in various Facebook groups that once the participant clicked on the link, the participant was redirected to the link on Survey Monkey where everything was anonymous. This helped with the anonymity of all participants. Students were emphatic towards the study due to the relatable nature of the experience as a fellow dissertation student; therefore, a sense of universal online student camaraderie was inadvertently established. However, adhering to the National Institutes of Health (NIH) Office of Extramural Research guidelines for protecting human research participants limited any biases.

Significance

In this study, I addressed a gap in the literature by examining if students' perception of their mentor communication styles and mentor behaviors were predictors of student stress and satisfaction. This study was an extension of other research previously done on effective mentoring and its impact on PhD students (de Valero, 2001). Exploring the factors of mentor communication style, student stress, mentor behavior, and student satisfaction will better assist in matching students and faculty chairpersons that will produce more student completers.

Although I looked at factors of mentoring as predictors of student stress and overall dissertation satisfaction, I also introduced some tangible measures of how to decrease student attrition. Poor faculty advisor-student relationships are among the reasons why students disconnect from degree completion (de Valero, 2001). Building the faculty advisor-student relationship by understanding communication styles and mentor behavior presents insight as to how to train mentors or dissertation chairs to better service

their students. A potential implication for positive social change for the staff and university is that the results could promote student wellbeing by reducing stress during dissertation. Implemented actions by both faculty and the university can ensure that the social learning community between student and faculty is appropriate, effective, and conducive in cultivating an environment where communication style and behavior are perceived in a positive manner. A new way of mentoring in distance learning dissertation programs could emerge or existing ways of mentoring could evolve that enhances the dissertation student experience. Some other potential implications for positive social change for students include increased self-efficacy, more positive mentor relationships, and more positive mentee-mentor interactions optimizing overall student satisfaction. A different focus on more aspects of mentoring could enhance mentoring relationships in distance learning dissertation programs.

Although there was extensive qualitative research about mentors and student perception, I examined student perception of mentor variables (communication style and specific behaviors) using a quantitative design. The finding may help to further research on dissertation learner satisfaction as well as help explain low retention rates in online doctoral programs and perhaps ways to increase retention in the future.

Summary

Students who began their journey towards PhD completion find themselves separating from the program of degree with all coursework, but the dissertation writing completed. Dissertation mentors play a role in students completing their studies in the doctoral program (Harrison et al., 2014). Student perception of their dissertation mentor

behavior was a predictor of overall satisfaction with the dissertation experience (Neale-McFall & Ward, 2015). Although there was much research about mentoring and student success, I looked at aspects of mentoring as predictors in this study. In Chapter 1, the problem statement was stated along with the background information on effective mentoring and the impact of mentoring on student achievement and satisfaction. In Chapter 1, I also defined the research questions, described the correlational nature of the study, and limitations of the study. A list of constructs was defined, and the scope of the study was described.

In Chapter 2, I review current literature related to graduate school experiences and dissertation, graduate school stress, mentoring and student self-efficacy, mentoring and student stress, mentoring and student success, mentor behavior and student attrition, mentoring and communication, and student satisfaction and success. I describe how the theories of self-determination and cognitive appraisal are related to mentoring communication, mentoring behavior, student stress, and student satisfaction. I also cover research related to different types of mentor communication styles.

Chapter 2: Literature Review

One in two doctoral students will not complete their degree, but researchers have not agreed on a way to support and encourage dissertation students (Marshall, Klocko, & Davidson, 2017). According to the Council of Graduate Schools (2009), student attrition is still a concern for many graduate programs. An overall 65% of students across all disciplines reported that mentoring/advising was a main factor contributing to Ph.D. completion (Council of Graduate Schools, 2009). Some of the reasons for student attrition as it relates to their relationship with their mentor included lack of a support system and not being able to balance the normality of their day-to-day routines to the demands placed on them due to the nature of the doctoral program (Herman, 2011). Programs and universities are now seeking strategies to address the problem of student attrition with full transparency and an openness to reform (Grasso, Barry, & Valentine, 2009). The future of higher education institutions is dependent upon moving more doctoral students to completion (Marshall et al., 2017). Further study is necessary to fully understand this phenomenon. Therefore, the purpose of this study was to look at dissertation student perception of mentor communication style and mentor behavior as predictors of student stress and overall student satisfaction.

This chapter begins with a discussion of the cognitive appraisal theoretical model. In Chapter 2, I also review the self-determination theory and highlight research on how it was applied in student success and satisfaction in dissertation. Graduate school experience of students and the dissertation process are also reviewed in this chapter.

Chapter 2 also includes a discussion of the factors related to mentor communication style and mentor behavior and its impact on student stress and student satisfaction.

Literature Search Strategy

A research strategy was implemented using Walden University Library's multiple databases, Google Scholar, and the World Wide Web. Research was gathered from multiple sources including textbooks, scholarly journals and articles, and online databases such as Educational Resources Information (ERIC), ProQuest, Education Source, PsycArticles, PsycInfo, Google Scholar, and EBSCO Host. The Internet was also used to search for related articles that were retrieved from several websites such as the National Science Foundation (2014) and the Council of Graduate Schools (2009).

I used the Boolean system of combining keywords with the connectors "and" or "or." The following search terms were applied: *mentoring, mentoring behavior, dissertation mentors, e-learning, mentor communication styles, dissertation mentor satisfaction, mentoring in graduate school, cognitive appraisal, cognitive appraisal and stress, self-determination theory, extrinsic motivation, and dissertation mentor stress.* Using these keywords produced a list of around 1,500 related articles on mentoring. Articles selected included research on mentoring in academic settings, dissertation mentors, mentor behavior, mentoring communication style, graduate student stress, leadership style, dissertation student satisfaction, and dissertation student stress. Relevant research covered the span of the past 10-15 years.

Theoretical Foundation

Cognitive Appraisal Theory

In the cognitive appraisal theory, Lazarus (1991) proposed that emotions arise due to an evaluation of a situation or circumstance. Cognitive appraisal was defined as the process that an individual evaluates for meaning and significance in comparing what takes the individual out of his/her own standard of equilibrium of his/her wellbeing (Lazarus & Folkman, 1984). If a person appraises his or her relationship to the environment in a way that creates uncertainty of the outcome (e.g., as facing uncertain threat), then an emotion is elicited that is associated with the appraisal pattern developed, such as anxiety. Lazarus (1991) developed the cognitive appraisal theory as an answer to the concerns about emotional response or the development of emotions. Lazarus used several questions or observations as the basis for the research: differentiation of emotion response to the same event, the range of situations that evoke the same emotion, what starts the emotional process, the appropriateness of an emotion to a situation, and irrational aspects of emotion. Cognitive appraisal and the meanings constructed from them are relational because they must simultaneously consider personal factors along with environmental demands, constraints, and opportunities (Frydenberg, 2002; Lazarus & Folkman, 1984). This interaction creates a need for each person to establish stress appraisal systems and coping strategies as a means of maintaining stability or fluidly between the person and the event or changing circumstances that take place across time (Lazarus, 1993). Every situation for every person, however, differs in their novelty, predictability, event uncertainty, imminence, duration, temporal uncertainty, ambiguity and the timing of stressful events in the life cycle for everyone (Lazarus & Folkman, 1984). Due to this variability in the situations, every individual presents a unique case.

Cognitive appraisal was categorized in three ways: harm/loss, threat, and challenge. Each build and relates to each other. Harm/loss was described as the damage that has already occurred, threat was described as anticipated (not yet taken place) harm/loss, and challenge was described as a threat that can be met or overcome (Carpenter, 2016). Cognitive appraisal has two forms: (a) primary appraisal and (b) secondary appraisal (Lazarus & Folkman, 1984). In primary appraisal, an individual gauge the potentially stressful situation in relation to his/her wellbeing. Then, the individual makes the decision if the event is of no significance that threatens his/her wellbeing, benign-positive which is explained as the event not taxing or exceeding any personal resources and denotes only positive consequences, or if the event is stressful causing a level of discomfort and uncertainty (Carpenter, 2016). During primary appraisal, an individual ponders the personal significance of a situation in respect to his or her own values, personal beliefs, situational intentions, and goal commitments. Following primarily appraisal is secondary. Secondary appraisal is the cognitive-evaluative process that focuses on diminishing harm or capitalizing on gains through coping responses (Folkman, 1982). It is comprised of purposeful evaluations of cognitive, affective, and behavioral efforts to decrease the effects of a stressor (Devonport & Lane, 2006).

Devonport and Lane (2006) looked at changes in primary and secondary appraisal in dissertation students as well as their coping strategies used in the final weeks leading to dissertation submission. Devonport and Lane assessed dissertation students' cognitive appraisal of dissertation writing and the process of dissertation including their experience

collaborating with the dissertation chair. The goal of the research was to measure if stress increased as students matriculated through dissertation over a span of 6 weeks.

Devonport and Lane measured the students' cognitive appraisal as well as the students' method of coping. Devonport and Lane showed that males saw the dissertation as more achievable and anticipated less threats to their wellbeing than female students did.

Devonport and Lane also showed that males used more effective coping strategies such as positive reframing, planning, and acceptance of the stressor, with lower scores in self-blame, venting of emotions, and behavioral disengagement.

Students did find the final-year dissertation writing process stressful, and students who appraised the situation as a challenge were less inclined to use coping strategies often associated with poor academic performance, but more inclined to use adaptive coping strategies such as planning (Devonport & Lane, 2006). Although Devonport and Lane (2006) showed a correlation between stress appraisal and coping strategies used during dissertation, they noted that the classification of coping strategies as adaptive or maladaptive could lead to flawed conclusions in which further research is needed.

Marshall, Klocko, and Davidson (2017) found that dissertation students associated much of their anxiety with producing doctoral level work, especially when there are explicit instructions given when writing a thesis or writing for publication. Students also experienced being overwhelmed from the editing and revisions feedback and developed feelings of rejection and hopelessness of writing regardless of many attempts to improve by depth or breadth of the recommendations (Ondrusek, 2012). Students attributed this to the lack of exposure to academic writing before program

admission (Thomas et. al., 2014). When students lack the research skills necessary for scholarly writing, the student leans toward grammatical changes in the editing process and less towards overall strengthening of their position or argument taken in the paper (Ondrusek, 2012). Scholarly writing appears to be a source of frustration due to the inability to meet the expectations (Marshall et al., 2017). When appraisal of a situation is negatively high, then student academic performance was significantly low (Hunsley, 1985).

Students experienced a greater perception of stress when they arrived to the point of writing their dissertation because (a) the student was uncertain about the research/writing process, (b) they felt like there was not enough support from supervisors or dissertation chairs, and (c) it was difficult to manage time (Silinda & Brubacher, 2016). Silinda and Brubacher (2016) concluded that at this initial stage in the process, many students cognitively appraised the situation, and some students made the decision to separate from the program. Students began to appraise their position as a graduate student and the stress they experienced as a disconnect that was not worthy of pursuing the goal of finishing their dissertation and decided that now was the time to “cut away” from their losses to maintain their physical, mental, or psychological wellbeing (Devonport & Lane, 2006). According to the self-determination theory, motivation influences the quality of mentoring relationships and the progression of the student through the process of mentoring in dissertation. The theory was used to understand factors influencing effective mentoring relationships from the student’s perspective. This study was specifically looking at motivational variables that resulted from the student-

mentor relationship. When studying the mentor-student relationship, the cognitive appraisal of stress theory defined psychological stress as "a particular relationship between the individual, and the environment that was appraised by the individual as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p. 19). The cognitive appraisal of stress was taken into consideration in the evaluation of how individuals cope with dissertation stress through the interaction with his/her mentor. By understanding how students appraise stress during dissertation, dissertation chairpersons and dissertation program coordinators can help students anticipate, identify, and reduce the causes of stress experienced during dissertation. Resources can be put in place to help students manage dissertation stress so that they do not feel overwhelmed to the point of abandoning goals of attaining their doctoral degree.

Self-Determination Theory

The self-determination theory was proposed by Deci and Ryan (1985), and it describes an individual's inherent need to be autonomous both in internal self-relations and self-relations with others. As an extension of humanistic theories, especially that of Maslow's self-actualization, Deci and Ryan used the notion of self-actualization and presented a description of the influences that affect how a person attains autonomy. Every individual has different goals to achieve, and their efforts to attain them are also unique and different (Al-Dhamit & Kreishan, 2016). Al-Dhamit and Kreishan (2016) noted that individuals have degrees of intensity and different orientations towards motivation in order to attain goals. Motivation displays how different physiological states influence human behavior (de Oliveira Durso, da Cunha, Neves, & Vilaça Teixeira, 2016). In

relation to self-determination theory, there are three distinct levels of motivation that drives individuals to meeting their goals: intrinsic level of motivation, extrinsic level of motivation, and autonomous level of motivation (Deci & Ryan, 1991).

de Oliveira Durso et al. (2016) identified several variables that influenced student motivation and student self-determination: (a) intrinsic motivation to learn, (b) intrinsic motivation to fulfill, (c) intrinsic motivation to experience stimuli, (d) extrinsic motivation by identification, (e) extrinsic motivation by introjection, (f) extrinsic motivation by external control, and (g) demotivation. Self-determination theory is based on human motivation, development, and wellbeing with a focus on motivation types that create autonomy (Deci & Ryan, 2008). Deci and Ryan (1985) conceptualized three fundamental needs conducive to the development of high levels of internal motivation: creating autonomy, developing competence, and understanding relatedness. These universal needs when met lead to fulfillment in each area (Guiffrida, Lynch, Wall, & Abel, 2013). These internal motivating factors drive behavior needed to complete any given task (de Oliveira Durso et al., 2016).

Autonomy is defined as an internal perceived locus of causality (Ryan & Deci, 2000). Autonomy occurs when individuals see themselves as agents in the internal causality locus that manipulates their actions to create the desired change (Deci & Ryan, 2008). This competence is conceptualized as self-efficacy (Ryan & Deci, 2000). It is the motivating factor that makes the individual feel that his or her actions affect outcomes (Ryan & Deci, 2000). Relatedness is the need to feel belongingness and connected with others (Deci & Ryan, 1985). One way to help individuals achieve all three levels of need

or satisfaction is to provide autonomy support (Reeve, 2009). Autonomy support, when applied to an academic setting in which this study, was the interpersonal behavior the teacher (or in this case dissertation mentor/ chair) provided during instruction to detect, foster, and shape students' inner motivational resources (Deci & Ryan, 1985; Reeve, 2009). Reeve (2006) explained that if a student does not receive autonomous support, then the student's motivation and engagement flounders.

When a teacher provides autonomous support, several characteristics of the teacher-student relationship become evident: (a) the instructor adopts the student's perspective; (b) the instructor welcomes the student's thoughts, feelings, and behaviors; and (c) the instructor focuses on the student's motivational development and the student's capacity for autonomous self-regulation (Reeve, 2009). When the teacher or mentor structures the learning environment in ways that nurture, involve, and expand on (rather than neglected, thwarted, and bypassed) the student's inner motivation, then the relationship is (a) enhanced in autonomy and engagement, (b) cultivated that moves the student to act, and (c) gave both the student and teacher a high quality, growth-promoting relationship (Reeve, 2006).

The self-paced process of dissertation work is one of the issues related to dropout rates; whereas, the addition of intense and effective facilitation through mentorship helped to raise the graduation rate to 73% (Andrews, 2016). Hausmann et al. (2009) examined the sense of belongingness as a determinant of student persistence and indicated that the students who reported more involvement behaviors also reported more social integration (e.g., development of close relationships with peers and/or faculty),

which was then translated by the researchers as an association with stronger student commitment to the university with accurate predictions of reenrollment. Hausmann et al. (2009) concluded that mentors who create an environment in which the students feel like they belong contribute to student persistence.

Creating self-determined students is important and impactful in the education of the whole student as well as preparing him or her for a productive life (Hong, Hartzell, & Greene, 2011). Self-determination theory was used to explain how students' behavior depended on social factors such as mentor's behavior and communication style (Sorebo, Halvari, Gulli, & Kristiansen, 2009). Self-determination theory as applied to student learning is the promoting of student interest of learning, education, and sureness in his or her own capabilities, capacities, and attributes (Deci & Ryan, 1991; Sorebo et al., 2009). It is the students' need to complete a certain task in a relationship and/or organization and the promoting of self-determined students that is instrumental in educating students holistically while preparing them for a fruitful life (Hong et al., 2011; Lyness, Lurie, Ward, Mooney, & Lambert, 2013).

Extrinsic motivation is defined as outside factors that influence student learning and achievement. There are four types of extrinsic motivation behaviors (Deci & Ryan, 1985). These extrinsic motivating behaviors include external regulation, introjected regulation, identified regulation, and integrated regulation (Deci et al., 1991). External regulation refers to behaviors regulated by external means such as rewards and constraints. These behaviors, however, are performed in an external fashion usually done by, in this case, the instructor or mentor. Once these contingencies are removed, the

individual may not remain involved or engaged in the activity or stop working on the activity or abandon it (Vallerand, & Bissonnette, 1992).

Introjected regulation refers to behaviors controlled by internal reward or punishment means. Integrated regulation are behaviors that are fully integrated into an individual's self-schema (Ryan & Deci, 2000). Integrated regulation is extrinsic because the behavior assimilated into a person's self-schema is in respect to the outcome of what is valued by someone else (Ryan & Deci, 2000; Vallerand & Bissonnette, 1992). Students who are extrinsically motivated engage in activities both for academic autonomy, competency, and purpose, but also obtain rewards or approval from others (McLachlan, Spray, & Hagger, 2011). Mentor behavior either motivates or discourages the students in such a way that their completion is no longer attached to the academic achievement but attached to how they interact with their mentor (McLachlan et al., 2011). According self-determination theory, the environment plays a role in an individual's need-fulfillment process (Janssen, 2015). When individuals are not supported by their social environment in their need-fulfillment, their motivation, functioning, and wellbeing is not optimal (Janssen, 2015). Self-determination theory focused on the level of motivation and the orientation of that motivation (Deci & Ryan, 2000). The research questions in this study related to both assumptions in the theory: the effect of doctoral student perception of mentoring behavior and student perception of mentor communication style as it related to the impact on student stress and overall satisfaction.

Graduate School Experience and Dissertation

The doctoral degree was intended to prepare students to learn, integrate, apply, disseminate, and communicate knowledge on a professional and scholarly way (Burkard et al., 2014). The graduate school experience is about endurance, flexibility, reflection, and decision making (Miller & Husmann, 1993). An individual journey necessitating intense stamina and strong-willed determination to endure to the end, the dissertation process is one of the challenging components to doctoral degree attainment characterized by a lack of curricular structure, absence of support from a learning community, feelings of loneliness, and possible loss of motivation, as well as possible dissatisfaction and miscommunication with committee members (Robinson & Tagher, 2017; Shulman, 2010). When looking at the graduate school experience at the dissertation level, there are six areas that relate to the experience in both positive and negative ways: expectations of the dissertation process, the research training of the student, expectations of both student and chair, the relationship between the chair and student, interpersonal difficulties experienced within the mentoring relationship, and social support and environmental impact (Burkard et al., 2014).

Expectations of Dissertation

Dissertation is described as the culminating activity that concludes students' experience in graduate school (Burkard et al., 2014). Through the dissertation, many graduate programs assess the abilities of their students (Council of Graduate Schools, 1991). These abilities include (a) a revealing of the student's capability to analyze, interpret, and synthesize information; (b) a demonstrating of the student's thorough understanding of the literature relating to the project or at least a fundamental

acknowledge of theory and premise on which the dissertation was built; (c) a describing of using appropriate methods and procedures; (d) a presenting of the results in a sequential and logical manner; and (e) a displaying of the student's capacity to discuss in detail and in a coherent manner the meaning of the results (Council of Graduate Schools, 1991). Dissertation research affords students with a hands-on and direct experience in primary research methods of the discipline as well as meeting expectations for the type of research/scholarship of a Ph.D. degree holder (Council of Graduate Schools, 1991). The doctoral degree, as described by the Council of Graduate Schools (1991), is preparing students to take what they have learned and integrate, apply, disseminate, and communicate that knowledge to the professional community (Burkard et al., 2014). However, many students experience foil in the end, resulting in noncompletion of their degree with all course work taken (Burkard et al., 2014).

After undergoing the rigorous challenges presented by the curriculum that trains and exposes the student to a plethora of information from every aspect within the student's field of study, the dissertation is the cumulative and final exercise that allows the student to not only display their acquisition of knowledge but to construct meaning to solve a problem or bridge a gap in the current field of study (Cavkaytar, 2014). The dissertation gave students the opportunity and duty to perform independent work while acquiring new knowledge in the field of study (Blum, 2010).

Research Training of Dissertation Student

Engaging students in earlier opportunities or on-going opportunities to do research decreases the graduate student's experience of dysphoria (anger, hostility, and/or

depression) towards the dissertation process (Cuetara & LeCapitaine, 1991). Cuetara and LeCapitain (1991), have drawn some conclusions that while dissertation increases research skills, it did not increase the motivation to conduct more research and that only through more interpersonal interaction with the dissertation mentors and perhaps membership on a research team develops the conduit necessary to create researchers and not just students who have done extensive research (Cuerta & LeCapitaine, 1991).

Expectations of Student and Chair

Students who experienced a misinterpretation of expectations for dissertation usually saw or understood the purpose differently than that of their dissertation chair (Isaac et. al., 1992). In a study done by Isaac et. al. (1992), 496 faculty members answered questions addressing the purpose of dissertation. A consensus reported that originality, significance, and independence were the process skills needed to write a successful dissertation (Isaac et. al., 1992). At the onset, faculty often saw dissertation as a prospect to deposit and transform research skills of the student, but the student interpreted dissertation as a roadblock to obtaining an additional and prestigious degree (Brause, 2001). From this incongruence in expectations, students experienced feelings of insecurity of their academic achievement and skill set leading to their inability to focus on their dissertations (Nerad & Miller, 1997). Where faculty were expecting less reliance upon them as dissertation chair, students were expecting more reliance on them as chair to guide them through the process of dissertation (Isaac et. al., 1992).

Students perceived the dissertation chairs as the main support during their dissertation (Barnes, Williams, & Archer, 2012). Camaraderie between the dissertation

chair and the student becomes vital to students during the dissertation especially when pressures to maintain normalcy increased frustration of expectations and the constant demands of focus and productivity increased, and the decreased level of social interaction were at their highest (Goulden, 1991). This was also the time at which many candidates either postponed finishing the degree or permanently became all but dissertation students, or "A.B.D." (Leatherman, 2000). Students in this state have made the final decision that the stress of the entire process have become unbearable to them and it was just "easier" to give up and throw in the towel on the "prize yet unattained" (Goulden, 1991).

Student – Chair Relationship

While dissertation is indeed a milestone of high honor and value, this stage presented the most emotional and developmental conflicts that a student will experience (Harrison & Whalley, 2008). Students use varying skills and an extensive deal of time and effort in producing a dissertation (Race, 2001). Through the completion of a dissertation, a student demonstrates his/her competence in a range of key content and subject specific skills necessary to understanding of the specific program or field of study (Harrison & Whalley, 2007). Harrison and Whalley (2007) noted that a good mentor–student relationship fortifies the dissertation process. Students that feel overwhelmed and daunted by the prospect of completing a dissertation deferred to these relationships as well as other supplemental aides such as departmental handbooks to calm these concerns and boost the student learning experience (Harrison & Whalley, 2007).

In a mixed-method design, 25 professional psychology doctoral graduates were examined to study dissertation experiences (Burkard et. al., 2014). Of the 25 students, 12

self-identified having positive experiences and 13 identified as having negative experiences. When looking at chair-student relationships, students disclosed details about the nature of their relationship and the displayed role of authority and power between themselves and their dissertation chairs. Students with encouraging dissertation experiences stated that their chairs were for the most part engaging and helpful during dissertation writing. Additionally, these students also stated that their chairs provided structure and guidance during dissertation (Burkard et. al., 2014). In contrast, students who described their experiences as negative, described the relationship in an undesirable manner noting that their chair was too busy with long response time in giving feedback of the work (Burkard et. al., 2014). Participants with negative dissertation experiences had problematic relationships with dissertation chairs and committee members which had immediate and long-lasting negative consequences that hindered the student's professional growth and emotional well-being (Burkard et. al., 2014).

Nixon-Cobb (2005) recanted her own dissertation experience during the oral defense. The oral defense is described as the process in which educational strengths and weaknesses are ascertained through an oral exercise between student author and dissertation committee and the experience can be one of uncertainty and fear if left unguided by his/her dissertation chair (Nixon-Cobb, 2005). Through the relationship with the dissertation chair, the author described several cardinal rules that would assist in having a more positive experience during oral defense. Those rules included honesty in answering questions, not being a victim of pressure of the oral defense, and not mediating with committee disputes and disagreements (Nixon-Cobb, 2005). The importance of the

mentor-mentee relationship was highlighted in that the mentee was better prepared for the dissertation process particularly when there was increased interaction with the mentor (Nixon-Cobb, 2005).

Interpersonal Difficulties Experienced Within the Mentoring Relationship

Due to the nature and time constraints that dissertation students experience, students developed feelings of isolation with their dissertation chair as well as social and intellectual isolation from others around them (Delamont et. al., 2000). This experience can be improved through the type of support received from his/her chair such as encouragement and positive feedback (Delamont et al., 2000). Dissertation students may experience difficulties in maintaining and/or developing interpersonal relations with their dissertation chair such as balancing independence and interdependence with their chair (Burkard et. al., 2014). This imbalance could lead to students experiencing fear of repercussions from their dissertation chair; therefore, the student will never assert their own opinions regarding their dissertations. Furthermore, students become unwilling to address concerns or conflicts about the dissertation or even the dissertation chair (Heinrich, 1995).

Social Support and Environmental Impact

Additional support systems, such as friends and family buttressed the graduate student's dissertation experience by providing the student with more emotional support (Flynn et al., 2012). Emotional support from friends and family prevented isolation experienced during dissertation, and their encouragement and feedback on different aspects of the dissertation process (e.g. conceptualization, writing, faculty relationships,

and time management) helped the student progress towards completion (Delamont et al., 2000).

Environmental impact was included as a delicate component in the graduate school experience. This component was not directly associated with the university, but this component dictated how effective the graduate student's time was spent working on university affiliated projects and assignments like the dissertation. In a study done by Flynn et. al. (2012), participants described that the impact of their environment had a significant influence on their ability to feel motivated throughout the process and to finally complete the dissertation. Participants in the study expressed emotions and stories about the consequences that work, home, and the school environment had on their ability to be productive throughout the dissertation process. The factors expressed by the participants that provided meaningful interpretation to the impact of their environment included family support, child care, practical needs, career support of doctoral studies, and peer support (Flynn et. al., 2012).

Graduate Student Stress

Stress was defined as an environmentally conditioned response to an incongruence between the individual and the environmental demands placed on the individual (Dewe, 1991). Stress is an exchange or transaction between the individual and the environment that impeded the individual's ability to find balance in expectations, employment of coping strategies, or comprehension of the situation at hand (Lazarus & Launier, 1978). Stress occurred when a person appraised a given transaction with the environment as exceeding their resources endangering their well-being financially,

emotionally, mentally, and/or physically (Lazarus & Launier, 1978). Some of the common stressors of graduate students included: academic workload, time management, professional isolation, conflict with employment, lack of social support, issues with personal relationships, financial difficulties and debt, and concerns regarding the future (Hudson et. al., 1994; Silinda & Brubacher, 2016).

The stressors typical for traditional and nontraditional graduate students alike were: balance of raising a family and most times working a fulltime job, adjusting time management demands with higher academic expectations than that of their undergraduate studies, stable work hours, easily accessible social supports, and financial strain (Kavanaugh & Pantesco, 2011; Ramos & Borte, 2012). Stress can come from several sources in graduate school. However, stress at a moderate level motivated and challenged students while elevated levels of stress limit the student's ability to perform in a successful manner (Kavanaugh & Pantesco, 2011). In addition to the stressors experienced, online graduate students experience a greater sense of disconnect and belongingness that negatively impacted the degree of learning interaction and achievement (Irani et. al., 2014).

The graduate student experience can be described as "intensely stressful", compounded by "guilt, mental and physical exhaustion, indecisiveness, imbalance, failure and depression" (Offstein et al., 2004). Graduate students both in online and face-to-face programs experienced the same level of stress (Manos, McCoy, & Morgan, 2011). These stressors included the demands placed on the student and the available support they received (Ewles et.al. 2016). With regards to support, graduate students stated that

other graduate students, family/friends, and significant others were supportive much of the time, whereas program faculty/administrators/staff were reported as being a source of support only a moderate amount of time (Ewles et. al., 2016).

Stress resulted in negative outcomes such as poor academic performance, reduction in cognitive functioning, poor family relations, impaired coping and incompleteness of graduate studies (Brown et. al., 2016; Saunders & Balinsky, 1993). Graduate students must maintain various roles and relationships in their lives all at the same time and often these demands take a great deal of time leaving the graduate student absorbed and consumed by all (Rummell, 2015). In a study by Grady et. al. (2014), graduate students from various master's and doctoral programs were assessed to understand stress from the role of social position and role strain. The researchers wanted to find out how the stresses of graduate school affected social roles (especially when they were instructors themselves) resulting in role conflict or role overload (Grady et. al., 2014). Role overload was experienced by graduate students when time constraints made their fulfilment of academic and nonacademic roles difficult to accomplish successfully (Austin 2002). The five primary sources of stress experienced by graduate student participants include: (a) intra-role strain among students' academic role-set, (b) inter-role strain between academic and nonacademic roles, (c) mentoring relationships, (d) isolation within the university and between university and non-university life, and (e) funding levels and availability (Grady et. al., 2014). These stressors caused students to feel unable to adequately fulfill the demands placed on them and prompted feelings of distress (Grady et. al., 2014).

In a study that surveyed graduate students about factors that contributed to their stress and coping strategies with university services, many of the students felt stressed (48.9%) or very stressed (24.7%) (Oswalt & Riddock, 2007). Getting good grades, earning their respective degrees, excessive homework, time pressure, financial difficulties, interpersonal problems and relationships with faculty were some of the reasons students reported feeling stressed (Oswalt & Riddock, 2007). These students also experienced lower levels of self-esteem and perceived themselves as less healthy (Oswalt & Riddock, 2007).

In a quantitative study intended to explore the differences in stressors among women enrolled in an online master's degree program in education, Arric et al (2011) found that female graduate students were most commonly stressed with issues related to family, finances, and health. The results also suggested significant differences among demographic variables of age, ethnicity, program start date, number of courses completed, and marital status (Arric et. al., 2011). Understanding the causes of stress of graduate students will help universities and students achieve goals of academic program completion as well as give mentors direction in their engagement and effectiveness with the students or mentees (Ramos & Borte, 2012).

Mentoring

Mentoring and Self-Efficacy

Bandura (1994) stated that self-efficacy is the belief in one's capabilities to organize and complete the necessary courses of action required to manage prospective situations. Bandura described these beliefs as premises of how people think, behave and

feel. Individuals with a strong sense of self-efficacy view challenges as opportunities to exhibit mastery. In addition, these individuals formed a stronger sense of commitment to their interests and activities, and they recovered quickly from setbacks and disappointments (Bandura, 1994). Self-efficacy was the most important predictor of stress symptoms of university students (Saleh et. al., 2015). In a study that looked at the role of mentoring and self-efficacy in nursing students, results showed that mentoring behaviors facilitated students' self-efficacy and reduced the students' inhibition of feelings of inadequacy toward their role of a registered nurse practitioner (Jnah & Robinson, 2008).

In a study that looked at how mentoring influenced self-efficacy in minority students, De Freitas and Bravo (2012) discovered that faculty members were likely to be the source of encouragement for the students and were acknowledged for their credibility and expertise in the field. Students who have been successfully mentored by their mentor, had greater confidence in their own self-efficacy. Santos and Reigados (2002) reported that mentoring program with more mentor-mentee contact led to higher levels of self-efficacy among Latino college student participants. Students from a Midwestern, public university completed surveys in study that looked at the role of mentorship on student self-efficacy (Baier et. al., 2016). Baier et al. (2016) reported that the perceptions of mentoring were important for student self-efficacy and ability to persist past the first semester in college. The frequency of mentor-mentee contact in addition to off campus contact, feeling respected by the mentor and perceiving the mentor as being approachable were among the other factors considered in raising student (mentee) self-efficacy

(Komarraju et. al., 2010). Komarraju and colleagues (2010) found that minority students who having no other academic role models improved in their self-efficacy by having a strong positive relationship with mentoring. Having a strong positive relationship with mentoring led more doctoral students to believe in their capability to write their dissertations (Varney, 2010).

Mentoring and Student Stress

Supportive faculty-student interactions may help students in managing stress therefore creating more healthy professionals (Clark et. al., 2009). When looking at factors that promoted more student engagement with less stress in an online environment, several factors were identified: timely feedback, a supportive environment where there is a sense of camaraderie, regular interaction with faculty, and courteous interactions (Holzweiss et. al., 2014). When students did not believe that faculty members were genuinely engaged in the classes taught, student perception of the academic quality of the instruction diminished and more stress was experienced (Armstrong, 2011).

In a study done with nursing students, students had anxiety about the fear of making a mistake, performing of the clinical skills, and clinical experiences (Walker & Verklan, 2016). Looking at peer mentors rather than traditional mentors, results showed that instances with high levels of contact between mentor and protégé resulted in students reporting less stress and more program satisfaction (Grant-Vallone & Ensher, 2000). What this means as a “take-away” for academic programs was that the type of communication interaction and frequency of that communication affected the amount of

stress and program satisfaction reported during the transitional phase of becoming a newly accepted graduate student (Grant-Vallone & Ensher, 2000).

House (1980) gave four types of mentor social support that led to lower levels of student stress. Mentor emotional support is defined as where the mentor incorporated trust, concern, and listening. Mentor appraisal support referred to implementing affirmation, feedback, and social comparison. Mentor informational support included aspects of providing advice, directives, and suggestions. The last form of mentor social support instrumental included characteristics of environment modification and financial guidance (Allen et. at., 1999). Allen et al. (1999) recommended that the emotional mentor support and appraisal mentor support corresponded with psychosocial support behaviors while informational mentor support and instrumental mentor support corresponded with the career support behaviors.

A positive relationship between career support received and a protégé's perception of their mentor were factors that helped students cope with stress (Allen et. al., 1999). Allen et al. (1999) also found that perceived availability of social support also potentially showed promise in protecting individuals from the harmful effects of stressful situations (Holahan & Moos, 1987). Even when looking at international students, the same findings were significant in correlating stress with social support and perceived social support (Bai, 2016).

Mentoring and Student Success

Faculty members have tremendous influence in enhancing the probability of successfully developing doctoral students into emerging scholars (Felder, 2010). A

national study was done on students who used mental health services provided by the campus and the results from the study was that a strong social support network boosted students' academic success (Enrollment Management Report, 2009). Mentoring impacted student success by reducing student vulnerability (Rademaker et. al., 2016).

Dissertation mentors defined student vulnerability as: (a) how students discussed their own academic skills and (b) how students cared about their own personal information (Rademaker et. al., 2016). Students were heavily concerned with various skills (writing, research, methodology design, statistical aptitude, data analysis interpretation and implementation) and how these skills were needed to complete a dissertation was a part of student vulnerability as a dissertation student (Rademaker et. al., 2016). Therefore, mutual respect and trust were key components to effective mentoring where the evolution of the mentor–mentee relationship changed the amount of vulnerability the student experienced and increased student success (Eller et. al., 2013).

How trust was established and maintained in mentoring relationships was studied in both face-to-face and online (Crawford et. al., 2014; Eller et. al., 2013). Online dissertation students stated that developing trust with their dissertation chair was a concern (Rademaker et. al., 2011). Trust as defined was the consistency in a pattern of communication established by the mentor (Rademaker et. al., 2016). Trust is the critical component in the effectiveness of the mentoring relationships (Hunt et. al., 2011). Hunt et. al. (2011) stated that chairs who conveyed their understanding of the monumental scholarly undertaking of writing a dissertation could leverage with that to build trust with their students by verbalizing the expectations directly and at the forefront of the required

commitment, many revisions, and the amount of time consumed which may be frustrating at times. Chairs who made students aware of the taxing process of dissertation were able to establish relationships with their mentees based upon honest and open communication (Rademaker et. al., 2016).

Bloom and Martin (2002) looked at how mentors built trust and rapport with their mentees. In this method called appreciative advising, the mentor interacted with the mentee by asking positive, open-ended questions which helped students heighten their educational experiences by achieving dreams, goals, and potentials (Bloom & Martin, 2002). The development of appreciative advising was a way to offer a framework for advisors to clear misconceptions about the advising process as well as highlight their student's strengths and show students how to redefine their own success in education (Hutson et. al., 2014). Appreciative Inquiry is a framework for mentors to use to help students form a career vision and then assist them in developing concrete, incremental, and achievable life and career goals that they will need to make their aspirations a reality (Bloom & Martin, 2002). Mentoring is the vehicle that provides a way for the advisors and their students to build trust early in the students' graduate experiences (Bloom et. al., 2010).

A UCLA study designed to determine the factors that distinguished those who are ABD and degree completers concluded that the mentoring process and their satisfaction of it was the decisive factor in whether they did or did not complete their dissertations (Benkin et. al., 2000). When students were mentored well, students were more focused and motivated to achieve their academic goals as well as persist (Laurian-Fitzgerald,

2015). Duckworth (2013) found that students who were mentored well reported that the skills learned not only affected their time during the university years but assisted them professionally after graduation.

Doctoral students are often characterized as mature nontraditional adult learners who are seeking advanced social learning as well as facilitated guidance to enhance their learning experiences in the classroom (Gardner, 2009). Knowles (1975) noted that adult learners must see the extension of the classroom in their network of other individuals to achieve development and further engagement for success. In areas of research relating to the doctoral student experience, the findings of the research concluded that mentoring relationships positively impact learning, career advancement, program satisfaction, and ultimately degree attainment (Terry & Ghosh, 2015). Mentoring also helped the adult learner assimilate appropriate social skills with the academic world through peer, faculty, personal, and professional connections that positively influence doctoral student success and lowered student attrition (Terry & Ghosh, 2015).

Mentor Behavior and Student Attrition

Hezlett and Gibson (2011) maintained the position that more research was needed to better understand how specific mentor behaviors create mentoring relationships that were supporting, satisfying, and effective for both the mentee and mentor (Hamlin & Sage, 2011; Hezlett & Gibson, 2005). Research suggested that about half of all doctoral students do not complete their degrees because of an incompatible or enigmatic advisor–advisee relationship (Council of Graduate Schools, 2010; Lovitts, 2005). Lovitts (2001) identified student attrition as an “invisible problem” that needs attention. The reason that

student attrition is called an “invisible problem” is because unless the student has been defined as a PhD student or candidate by terms of the university, the student can arrive at the same junction as other students that are not considered a PhD student or candidate and separate from the program and never be counted as dropping out of the program (Lovitts, 2005). Students can separate from the program in the prospectus stage of writing their dissertation and not be counted as a PhD student because of the university’s terms and requirements, the student’s title at that time is not a PhD student (Lovitts, 2001). Defined as a PhD student/candidate or not, the effects of the separation and student attrition is still a problem worthy of attention for both the university and the student (Lovitts, 2001).

Some reasons specific to the mentor-mentee relationship that were attributed to student attrition included the unclear expectations of the advisor–advisee relationship and a lack of interaction, trust, and intellectual support (Foss & Foss, 2008; Golde, 2005). Because of this, many doctoral students perceived professional risks involved in changing advisors that they decided to transfer to other graduate programs or simply separated from the program of study altogether (Golde, 2005). Even for those who remained in their initial track, poor advising leads to an extended time to earning the degree for some doctoral students (Wao et. al., 2011). Because of the impact of doctoral advising upon degree progress, higher education personnel (i.e., faculty, administrators, and other staff) should encourage effective doctoral advising (Craft et. al., 2016).

Some factors that influenced effective doctoral advising included advisor characteristics and advisor role (Craft et. al., 2016). Effective advisors of doctoral

students were perceived as accessible, helpful, socializing, and caring, while advisors who were inaccessible, unhelpful, and uninterested in students were considered less effective (Barnes et. al., 2010). Important roles of doctoral advisors included providing reliable information sources, acting as departmental and occupational socializers, advocates, and serving as role models (Winston & Polkosnik, 1984). Others have suggested that doctoral advisors need to also engage in mentoring behaviors aimed at the professional development of their graduate students (Heppner & Heppner, 2003). Hollingsworth and Fassinger (2002) found that mentoring contributes to the development of research skills and acted as a predictor of student productivity.

Bloom et al (2007) looked at the graduate student–graduate advisor relationship in terms of how mentor behavior impacted graduate student success. The student submitted an essay response about their mentor, the effectiveness of his/her role, how the advisor assisted in professional growth, and if the mentor/advisor should be recommended to other students (Bloom et. al., 2007). The mentor behavior themes that were discovered in this study paralleled to other studies that looked at mentor behavior (Bloom et. al., 2007). The five major themes were: a demonstrated care for students, accessibility of the mentor, the mentor served as role models in professional and personal matters, mentors tailored guidance for each student, and the mentor proactively integrated students into the profession (Bloom et al., 2007). In addition to that, the study indicated that students appreciated their advisors more when they felt that the mentors exhibited all of the themes aforementioned and were approachable with professional and personal issues (Bloom et. al., 2007).

Neale-McFall and Ward (2015) asked graduate students to describe their chairperson's behavior as well as rate their overall satisfaction with their dissertation chairperson. They concluded that students were more satisfied with their dissertation chair and the program when positive displays of these mentor behaviors were evident: work style, personal connection, academic assistance, mentoring abilities, and professional development (Neale-McFall and Ward). Neale-McFall and Ward (2015) concluded through research several perceptions of doctoral students that predicted overall student satisfaction. These perceptions included: how well the student collaborated with their chairperson, work style of the chairperson, personal connection with chairperson, the chairperson ability to focus on personal and mentoring techniques that validated student work and efforts. The amount and quality of contact between doctoral students and their chairperson were frequent findings of student attrition and degree completion (Bair & Haworth, 2004).

Mentoring and Communication

Communication is an important aspect of the mentoring relationship in that these relationships are initiated, maintained, and terminated using communication (Cruz, 2007). The ability to communicate information effectively with others helps the chairperson identify problems in skill or time management that the student may have (Solaja et. al., 2016). Communication in the mentoring relationship occurred when the mentor (usually a senior member in the field) supported, tutored, guided and facilitated the mentee (usually the junior member in the field) in career development (Kogler Hill et. al., 1989a). Through effective communication, the dissertation chair or mentor developed

the ability to keep the student focused and purpose driven while maintaining a healthy relationship between themselves and the student or mentee (Solaja et. al., 2016).

There were two types of communication exhibited by mentors: formal communication and informal communication (Cruz, 2007). Formal communication is more task oriented whereas informal communication is more social oriented. Formal communication may result in distance between the mentor and the mentee whereas informal communication may assist protégés ease of tensions associated with the socialization process (Young, 2005). The frequency of communication was also noted as a factor that led to greater satisfaction when comparing frequent informal contact to formal less frequent contact (Allen et. al., 1997).

Mentor behavior and communication can aide a student by developing the students' ability to respond positively to stress and helping the student to minimize stress by teaching them to address the root cause of situations as well as teaching students how to communicate in such a way that the students' understanding of the nature of the dissertation experience will lead to a better interpretation of what to expect as a dissertation study (Soric et al., 2013). Communicating to the student in a style that the student can positively identify with prepares the student to become more self-guided with less direct supervision all while understanding that the support of their dissertation chair is available (Soric et. al., 2013). This helps the student appraise that the process of obtaining their doctoral degree is foreseeable which increases completion of the study and results in more students being satisfied with the dissertation experience (Werle, 2010).

Effective communication allows the mentors or leaders to create, nurture, and sustain useful exchanges with those that they lead or mentor (O'Neal et. al., 2016). Effective leadership, or mentorship, happens when the communication of leaders and those that they lead can be described as a mutually respectful, trusting, and committed environment (O'Neal et. al., 2016; Rademaker et. al., 2016). Poor communication skills hinder the process of sending, receiving, processing and retrieving information between chairperson and student all during the dissertation chairperson's attempt to produce productivity effectively (Solaja et. al., 2016). Ineffective communication skills cause the mentor to fail in the management, coordinating, organizing, planning, and even controlling the work of the student toward achievement of the set targets (Solaja et. al., 2016).

The two major communication styles mentor predominately used were interpersonal communication and communication openness (Ismail et. al., 2012). When mentor's use interpersonal communication style, mentors share their knowledge, feelings, thoughts and experience with mentees (Ismail et. al., 2012). This communication style maximizes group and/or individual's potential in carrying out duties and responsibilities, the mentee becoming familiar with new techniques and the mentor demonstrating care for almost all aspects of mentee (Cummings & Worley, 2009). Furthermore, interpersonal communication can also be explained as a form of personal communication that occurs between individuals to accomplish a goal (Kozina & Mleku, 2016). Sagie (1996) noted that effective mentors used interpersonal skills in their communication style to create

well-structured task-oriented interaction with their mentee while encouraging the mentee to participate in the goal setting process.

To help dissertation students reach the fundamental psychological needs of autonomy, competence, and relatedness, the mentor needs effective interpersonal communication skills (Hargie, 2010). As described before, autonomy can be defined as the fulfillment of being the origination of one's own behavior or the perception thereof (Deci & Ryan, 2002). Through effective interaction between the mentor and the mentee, competence and relatedness were experienced (Deci & Ryan, 2002).

Communication openness is the quality of interpersonal effectiveness that incorporated the mentor's willingness to interact openly with the mentee and to self-disclose as appropriate (Santos & Reigadas, 2005). Further described, it is the mentor's willingness to react honestly to incoming stimuli as well as a willingness to own your feelings and thoughts (DeVito, 2008). Communication openness is a communication style in which there are high levels of sharing of information such as when mentors delivered information about the procedures, content, tasks and objectives as well as conducting honest and comfortable discussions about mentees' academic and personal matters (Santos & Reigadas, 2005; Troy et al., 2001). Through effective communication, the mentors' experience can be fulfilled in successfully making the mentee a part of a professional community (Ryan, 1995). Effective mentoring has several goals: increased desirable behavior in mentees while decreasing undesirable behavior in mentees that fostered growth and development for the mentee (Keller, 2007). This is accomplished by mentors building trust, providing understanding, and creating relationship reciprocity

(Zeldin et. al., 2005). While the existing body of literature did not consider the types of communication that were used in context of the mentoring relationship, this study made some attempts to further develop this connection of communication and mentoring (Cruz, 2007).

Student Satisfaction and Success

An important indicator of program or course quality is student satisfaction. It is one of ‘five pillars’ of quality in e-learning included in the list of learning effectiveness, access, faculty satisfaction, and institutional cost effectiveness (The Sloan Consortium, 2013). The attitudes of students in how satisfied they were with the course or program was the best factor used to predict whether students will persist and complete their studies (Kane et. al., 2015). Student satisfaction is a significant determinant to online program quality (Kane et. al., 2015). Various factors determined student satisfaction such as: the sense of community and connectedness between the student populations especially in a course or degree program and the shared feelings of student commonality of learning expectations and goals (Marmon et. al., 2014).

As the availability of online education opportunities continues to rise, understanding the factors that influence online student satisfaction and success is key to increasing and maintaining student engagement and student retention (Kane et. al., 2015). Students found to be dissatisfied with a course were more likely to end their studies early (Levy, 2007). When looking at online distance learning (e-learning) and student satisfaction, understanding instructor behavior from students’ perspectives led to student satisfaction (Howell et. al., 2016).

When looking at the mentor-mentee relationship, some of the factors that led to student dissatisfaction included infrequent interaction time with their supervisor, the distant ways of communication such as a quick email or “ad hoc” phone calls, how the supervisor advised in giving overcritical information or suggestions that contradicted earlier directives, and apparent lack of availability of the supervisor or mentor (Harrison et al., 2014). Student satisfaction influences and guides the journey of student learning, positively effects student motivation and engagement with course materials, and affects overall course performance (Sahin & Shelley, 2008). Harrison et al. (2014) identified several factors that influence student satisfaction on e-learning courses: relevance of the course materials, the learner’s autonomy, and the student and instructor’s competence with technology (Harrison et al., 2014).

In a study conducted to measure student satisfaction of an online distance learning master’s program, more specifically the dissertation course, several highlighted themes were presented that affected student satisfaction and impacted student success (Harrison et al., 2014). The feedback most significant was how the mentor cultivated: mentee self-development, an environment for peer support, and the development of improved writing skills (Harrison et al., 2014). Findings from this research suggested that appropriate information, study skills, and supervisory support in an online distance learning were significant for mastery of the dissertation course (Harrison et al., 2014). Harrison et al. (2014) reported that many of students were dissatisfied with the brief amount of time with their supervisor, timing of communication, and purpose of the supervisor-student

contact. This further supported that student satisfaction and success was tied to mentor interaction (Kuo et. al., 2013).

The perception of being cared for or social support must be meaningful to the student (Harrison et al., 2014). What was interesting was not in what was being offered by the mentor in the form of support, but what was perceived from the student that was real (Tompkins et. al., 2016). Social support was at least one variable that has been linked to positive academic and personal outcomes for graduate students (Harrison et al., 2014). Tompkins et. al. (2016) studied the relationship between social support from 3 sources (peers, family/friends, and faculty) and 2 indices of satisfaction (program and general life) for graduate students in American Psychological Association accredited professional psychology programs. Doctoral students completed self-report measures pertaining to sources of social support, graduate program satisfaction, and general life satisfaction (Tompkins et. al., 2016). Regression analyses revealed that these 3 sources of social support (peers, family/friends, and faculty) contributed to 28% of the variance in program satisfaction and 30% of variance in overall life satisfaction (Tompkins et. al., 2016). Faculty and student-peer support explained variance in ratings of program satisfaction, while all 3 forms of social support explained variance in overall life satisfaction (Tompkins et. al., 2016). When comparing in between variance of program satisfaction with that of student-peer support and faculty support, faculty support explained a greater amount of variance (Tompkins et. al., 2016).

Ives and Rowley (2005) found that dissatisfied PhD students were less probable to finish their dissertations and negative implications impacted the credibility of the

university and the mentor. On the contrary, students who felt involved in the selection of their supervisor, had topics that were matched with their supervisor's expertise and who developed good interpersonal working relationships with supervisors were more likely to progress further and be satisfied (Ives & Rowley, 2005). It was concluded in a study done by Kane et. al. (2015) that the quality and quantity of faculty and student interactions predicted the level of how a student feels invested in the university and ultimately how satisfied the student felt and the success of the student. Student satisfaction also contributed to future student enrollment in the same programs (Howell et. al., 2014).

Summary and Conclusions

In chapter 2, I reviewed the current pertinent literature related to graduate school experiences and dissertation, graduate school stress, mentoring and student self-efficacy, mentoring and student stress, mentoring and student success, mentor behavior and student attrition, mentoring and communication, and student satisfaction and success. The information presented the various theories related to mentoring communication, mentoring behavior, student stress, and student satisfaction. I also covered research related to different types of mentor communication styles. I examined the literature most pertinent to assessing the relationship between mentor communication styles and mentor behavior and student stress and student satisfaction. Student attrition is still a major concern for many graduate programs and many students attributed mentoring/advising as the main factor contributing to PhD completion (Herman, 2011).

The literature revealed that effective mentoring is an important factor to decreasing student attrition and increasing student completion of the PhD program (Ives

& Rowley, 2005). However, there have been no direct links that have stated how mentor communication styles and mentor behavior can predict student stress and satisfaction. Previous research has shown that effective mentoring has a significant impact not only on degree completion, but student confidence, stress, and satisfaction. What was not known was which aspects of mentoring were factors related to effective mentoring. In other words, can mentor communication style and mentor behaviors be used to predict student success at completing their dissertation and if they were satisfied overall with the dissertation process. This study addressed this research gap by extending to the current literature. I assessed the relationship between the perception of mentor communication style and mentor behavior to dissertation student stress and satisfaction. I addressed this gap by examining whether mentor communication style and behavior predicted student stress and satisfaction. In chapter 3, I provided detail on the research methodology, the identification of participants, measurement instruments, threats to validity, and ethical considerations.

Chapter 3: Research Method

Completion of the dissertation is a milestone, but it is also an obstacle for PhD students (Blum, 2010). This obstacle for many students has led them to drop out of the program and become ABD students. With student attrition still a concern for many colleges and universities, effective mentoring has been noted as an effectual change to decreasing the population of ABD students (Strebel & Shefer, 2016). In this study, I examined if student perception of mentor communication style and mentor behavior can predict dissertation student stress and satisfaction.

Chapter 3 contains the following sections: the research design and rationale, methodology, population, sampling and sampling procedures, power analysis, procedures for recruitment and participation, instruments, demographics, data analysis plan, threats to validity, and ethical considerations. In the research design section, I describe the approach and process that was used to conduct the study. For this study, I used multiple regression and I provide rationale for its selection along with reasons for not choosing the other designs. In the participant section, the population is defined, and the sampling strategy I explained. In the instrumentation section, I present an in-depth description and rationale of the measurement tools use to collect the data. The CSI as well as the CASS and the variables used in this study are operationalized. Finally, in the chapter, I describe the process by which the data were collected and analyzed.

Research Design and Rationale

The nature of the study was quantitative, with a nonexperimental correlational design using survey methodology. Multiple regression analysis was used to evaluate the

relative strength of several predictor variables of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness) and mentor behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development) on the criterion or dependent variables of dissertation student stress and dissertation student satisfaction. Multiple regression is designed to assess whether one continuous dependent variable can be predicted from a set of independent (or predictor) variables, or how much variance in a continuous dependent variable is explained by a set of predictors (Cohen & Cohen, 1983). Multiple regression provides a way to understand the relationship of a set of independent variables (IV) to a dependent variable (DV), and it allows the researcher to explain or predict a dependent variable (Orme & Combs-Orme, 2009).

Participants included dissertation students who had completed at least 2 quarters of dissertation classes with the same dissertation chair. Multiple regression was used to identify the best set of predictor variables for student stress and satisfaction during the dissertation process. The study variables and how they were assessed was shown in Table 1.

Table 1

Predictor and Criterion Variables

Criterion Variable		Instrument	Scale of Instrument	Total Score/ Subscale Score
Dissertation stress	student	Cognitive appraisal of dissertation stress	Interval	Factors scores are calculated by finding the mean. Higher scores on each scale or item indicate greater agreement with that appraisal
Dissertation satisfaction	student	Dissertation Chair Satisfaction Survey	Interval	Total Dissertation Chair Satisfaction Score
Predictor Variables		Scale of Measurement	Instrument	Total Score/Subscale
Mentor Communication Style		Communication Styles Inventory (CSI)	Interval	Expressiveness Subscale Score Preciseness Subscale Score Verbal aggressiveness Subscale Score Questioningness Subscale Score Emotionality Subscale Score Impression Manipulativeness Subscale Score
Mentor Behavior		Dissertation Chair Satisfaction Survey	Interval	Personal connection subscale score Work style subscale score Mentoring abilities subscale score Academic assistance subscale score Professional development subscale score

This quantitative study was designed to determine the predictive relationship between perceived mentor communication style and perceived mentor behavior on dissertation student stress and satisfaction.

Methodology

Population

This study involved dissertation students who were currently enrolled in dissertation classes from an online university who had completed at least 2 consecutive quarters with the same dissertation chairperson. According to Walden University, there were about 42, 847 graduate students (Walden University Office of Institutional Research and Assessment, 2015). The target population for this study included students pooled from the total number of graduate students at Walden University as well as self-identified online dissertation students within dissertation student support groups from various online universities via social media websites. Student stress and satisfaction were examined with the dissertation students still enrolled in the course because once students separate from the degree program, they are difficult to locate, and the information they provide comes from recollections, which may change over time (Bair & Haworth, 1999).

Sampling and Sampling Procedures

I used a nonprobability sample of convenience, which is a sampling method that did not involve random selection and is a hybrid of a convenience (i.e., asking for participants) and self-selection sampling (individuals choose to participate in the study). Every attempt was made to recruit participants from a wide range of disciplines, ethnicities, ages, and gender so that the data were generalizable. Because student

participants were dissertation students who had completed at least 2 quarters of dissertation with the same dissertation chair, nonrandom sampling was most appropriate. Student participants must have completed at least 2 quarters of dissertation and maintained the same dissertation chair for at least 2 quarters. Recruitment was done using the Walden University Participant as well as a Facebook ad that was published within several student-led student dissertation support groups from various online universities. After approval from institutional review board (IRB-06-18-18-0077107), information about the details of the study was uploaded in the participant pool and the ad was placed in various online universities' student-led Facebook groups with the administrator's permission. Eligible students were welcomed to participate in the study. The Walden University Participant pool acts as a bulletin board posting studies that are available for interested and qualified participants to actively join and participate. The participants were graduate students from various disciplines as well as various online universities. I chose to include students from all disciplines and all available online universities to have a usable sample. Eligible participants were dissertation students who had completed at least 2 quarters of dissertation and at least 2 consecutive quarters with the same dissertation chairperson. Ineligible participants were individuals who did not satisfy the description aforementioned.

A power analysis was performed using G*Power 3.0 software to calculate sample size (Faul, Erdfelder, Lang, & Buchner, 2007). The statistical variables included for the power analysis were alpha level, number of predictors, anticipated effect size, and desired statistical power (Faul et al. 2007). The variables included in the power analysis were an

alpha level of 0.05, 11 predictor variables, an anticipated effect size of medium size of 0.15, and a statistical power of 0.95 (Faul et al., 2007). An alpha level of 0.05 was used to minimize the probability of Type I error. The power analysis resulted in a recommended sample size of 178 participants.

Procedures for Recruitment and Participation

Approval to conduct the research was obtained from the IRB at Walden University. As approved by IRB, I filled out the application for approval to post my study on the university's participant pool (Appendix B). After approval, a description of the study was posted on Walden's Participant Pool and an ad was placed on several online university student-led Facebook groups. Participants registered on the website to participate in the posted studies. Each registered individual was given an identifying number in lieu of his or her name. This process ensured privacy and upheld the standards of confidentiality as given by the American Psychological Association. Students then login using their ID number to read all of the available posted studies as well as to register for the one that they wanted to participate in. Participants then clicked on the link embedded within the Participant Pool page to be directed to the surveys used in this study. Participants who were recruited via the Facebook page were able to click on the link within the ad to be directed to the online surveys used for this study.

Once participants clicked on the link, they were taken to the first page of the survey on the Survey Monkey website. The first page of the website was the informed consent form as it was approved by the Walden University IRB. This page contained the informed consent document that had to be signed electronically before their participation

continued. The demographic form (Appendix A) was used to collect information on participants' age, gender, race, how many hours a week they work, relationship status, number of children, number of terms working with dissertation chair, and gender of dissertation chair.

The informed consent form explained the individuals' rights as well as information about the confidentiality of this study. Participants were informed of the purpose of my study, information on the sponsoring institution, risks and potential benefits for participating, and a guarantee of confidentiality. Any participants interested in receiving more information regarding the topic discussed were invited to contact me via e-mail or phone contact. Participants could refuse participation at any time and had the opportunity to leave the study at any time. Participants were not allowed to skip questions within the survey but could stop their participation by ending or quitting at any time. Indication of their separation as a participant of the study was identified by blank or incomplete surveys collected by me. This study did not have any follow-up procedures, as this was a one-time data collection study and the retrieval methods of the surveys were all computer based. Eligible participants completed the surveys in the following order via Survey Monkey: (a) demographic form (Appendix A), (b) the modified CSI, (c) CASS, and the (d) Dissertation Chair Satisfaction Survey.

Instrumentation and Operationalization of Constructs

Communication Style Inventory

A modified version of the CSI had a total of 96 communication behavior items and measured the perception of the characteristic way a person sends verbal, para verbal,

and nonverbal signals in social interactions (De Vries et al., 2013). The items were divided equally among the following six domain-level subscales: expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness (De Vries et al., 2013). Each of the domain-level scales consisted of four facets, each with four items, and all items were answered on a Likert-type scale with answering categories ranging from 1 (*completely disagree*) to 5 (*completely agree*) (de Vries et al., 2013). Each subscale received its own individual score. The survey allowed for an individual to identify his or her mentor's communication style.

The survey's subscales were defined as expressiveness (communication that displayed the verbal expression of extraversion), preciseness (communication that displayed behavior as being structured and concise), verbal aggressiveness (communication that displayed behavior as angry, authoritative, derogative, and non-supportive), questioning-ness (communication that displayed behavior as philosophical, inquisitive, argumentative, or simply unconventional in nature), emotionality (communication that displayed being piqued, stressed, sentimental, sad, defensive, and bad-tempered), and impression manipulateness (communication behaviors used to obtain status or other rewards (Barnett & Johnson, 2016). Sample questions included expressiveness ("my mentor often determines which topics are talked about during a conversation"), preciseness (e.g., "my mentor weighs his/her answers carefully"), verbal aggressiveness (e.g., "my mentor can sometimes react somewhat irritably to people"), questioningness (e.g., "my mentor always asks how people arrive at their conclusions"), emotionality (e.g., "my mentor tends to talk about his/her concerns a lot"), and

impression manipulativeness (e.g., “Even if my mentor would benefit from withholding information from someone, my mentor would find it hard to do so”; DeVries et al., 2013).

Bakker-Pieper and DeVries (2013) examined whether communication styles had any incremental validity over measures of personality in predicting leader outcomes. Cronbach’s alpha reliabilities ranged from .79 (Impression manipulativeness) to .93 (verbal aggressiveness) in the student sample and a range from .74 (impression manipulativeness) to .89 (verbal aggressiveness) in the community sample (Bakker-Pieper & DeVries, 2013).

Congruence coefficients were calculated to evaluate the validity of the modified version of the CSI (Bakker-Pieper & DeVries, 2013). Using the combined data from this study and the study with the original CSI, principal components analyses on the 16 facets were conducted (Bakker-Pieper & DeVries, 2013). An eigenvalue greater than 1 was found in six principal components and were extracted explaining a 68.0% variance in the data (Bakker-Pieper & DeVries, 2013). For consistency measures, a Procrustes analysis was performed using the factor loadings matrix (Bakker-Pieper & de Vries, 2013; DeVries et al., 2011). An average congruence coefficient of .94 was found, but for each of the factors, the congruence coefficient was greater than .90 (author, year). Absolute intercorrelations for the combined data ranged from .00 (emotionality–questioning-ness) to .46 (verbal aggressiveness–preciseness) with an average of .22 (Bakker-Pieper & DeVries, 2013).

Cronbach's α for each domain-level communication behavior were as follows: expressiveness ($\alpha = .76$), preciseness ($\alpha = .74$), verbal aggressiveness ($\alpha = .77$), questioningness ($\alpha = .80$), emotionality ($\alpha = .81$), and impression manipulativeness ($\alpha = .63$; Barnett & Johnson, 2016). Cronbach reliabilities of the modified version of CSI domain-level scales ranged from .82 to .88 in the community sample and from .83 to .87 in the student sample (Bakker-Pieper & DeVries, 2013).

Cognitive Appraisal of Dissertation Stress Scale

The CASS was developed by Devonport and Lane (2006). The survey's subscales were defined as threat (will cause future harm), harm/loss (means that the damage has already been experience), challenge (will develop a positive stress response because you expect the stressor to lead to greater expectations), irrelevant/benign (does not have any affect a person's wellbeing), and secondary appraisal (involve those feelings related to dealing with the stressor or the stress it produces (Kessler, 1998). Kessler (1988) modified the 28-item CAHS by deleting the term health problem and replacing it with the term dissertation (Devonport & Lane, 2006). For example, the statement, "I have a lot to lose because of this health problem," was written to state "I have a lot to lose because of this dissertation" (Devonport & Lane, 2006).

The CASS assessed the primary and secondary appraisal of stressors experienced during dissertation stress. Four subscales measured primary appraisal. Six items measured the primary appraisal subscale of challenge, five items measured the subscale threat, eight items measured harm/loss, and four items measured the subscale benign /irrelevant (Devonport & Lane, 2006). An example item from the primary appraisal

challenge subscale was “This dissertation won’t get me down.” An example item from the threat subscale was “This dissertation is frightening to me.” An example item from harm/loss subscale was “I have not been able to do what I want to do because of this dissertation.” An example item from the benign/irrelevant was “This dissertation isn’t stressful to me.” Finally, secondary appraisal items included: “I need to know more before I can do anything about this dissertation,” and “I have to accept this dissertation.” (Devonport & Lane, 2006).

Participants responded to each item on the CASS based on their cognitive appraisal of their status over the writing of dissertation. Questions were scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A final score was calculated by taking the mean average of the factors scores that was done by taking the sum of items and dividing them by the number of items. Higher scores on each item indicated greater congruence with that appraisal (Devonport & Lane, 2006).

Devonport and Lane (2006) did not develop any psychometric properties of the modified instrument. The Cronbach’s alphas of the CAHS were 0.79 for harm/loss appraisal, 0.74 for threat appraisal, 0.70 for challenge, 0.75 for benign/irrelevant, and 0.70 for the secondary appraisal scale (Ahmad, 2005). In this study, I looked at internal consistencies to report reliability for the CASS.

Dissertation Chair Satisfaction Survey

The Dissertation Chair Satisfaction Survey was developed by Neale-McFall (2011) and consisted of four sections: demographics, student selection criteria of dissertation chairperson (e.g., is doing research like my dissertation topic), chairperson

behaviors (e.g. provided effective feedback on my dissertation work) and students' overall satisfaction with their dissertation chairperson (e.g. overall, how satisfied were you with your dissertation chairperson). Participants answered each item on the Dissertation Chair Satisfaction Survey (Dissertation Chair Mentor Behavior section) based on their perception of their dissertation chair behavior. All questions were scored on a 4-point Likert scale ranging from 1 (*completely disagree*) to 4 (*completely agree*). Subscales scores were calculated taking a mean average which was done by adding the scores of each item and dividing them by the total number of items.

Student overall satisfaction with their dissertation chair was measured by a single survey item on the Dissertation Chair Satisfaction Survey in which participants were asked to rate their level of overall satisfaction with their dissertation mentor on a Likert scale ranging from 1 (*very dissatisfied*) to 6 (*very satisfied*) (Neale-McFall & Ward, 2015). For this study, only the sections/scales of chairperson behavior and participants' overall satisfaction with their dissertation chairperson were used. The final instrument consisted of 62 items of which only 35 were used for this study. The Dissertation Chair Satisfaction Survey was used to measure student perception of mentor behavior and overall student satisfaction.

Survey items for the Dissertation Chair Satisfaction Survey were developed based on a qualitative pilot study and a review of peer-review literature addressing chairperson behaviors, criteria used by individuals to select their chairperson, and individuals' overall satisfaction with their chairperson (Neale-McFall, 2011). Neale-McFall (2011) examined the factors that influenced new counseling professionals' selection of their dissertation

chairperson and chairperson behaviors. The researcher used purposeful and snowball sampling to secure participants to see what they considered to be the most important factors for selection and behaviors their chairperson exhibited that positively or negatively impacted the advising relationship (Neale-McFall, 2011).

Neale-McFall and Ward (2015) conducted multiple regressions to investigate which selection criteria and which chairperson behaviors were most influential in predicting participants' overall satisfaction with their chairperson. They found that chairperson behaviors significantly predicted overall satisfaction. Results from the regression indicated that two behavior components, work style and personal connection, and one selection component, success/reputation, accounted for 72.7% of the variance for the dependent variable of overall satisfaction (Neale-McFall, 2011).

Since the study was done on an exploratory basis, Neale-McFall (2011) did not test the tool for reliability and this tool has not been used in other studies. The researchers established construct validity of the tool by sending the survey items for review to a panel of counselor educators who had recently (within the last 5 years) completed their doctoral dissertation in a CACREP-accredited counseling program (Neale-McFall & Ward, 2015). Changes were then made to the instrument including the addition of one demographic question, the modification of wording on two selection items, and the removal of one chairperson behavior item due to redundancy (Neale-McFall & Ward, 2015). Furthermore, the selection criteria construct, and the chairperson behavior construct revealed high alpha reliabilities of 0.79 and 0.94 (Neale-McFall & Ward, 2015).

Data Analysis Plan

The data was analyzed using the SPSS 18.0 software package. Research questions were evaluated by looking at the relationship between the six subscales of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness) as measured by a modified version of the CSI and dissertation student satisfaction and dissertation student stress as measured by the CASS, and the five subscales of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development) and dissertation student satisfaction both measured by the Dissertation Chairperson Satisfaction Survey. The demographic questionnaire covered age, gender, race, marital status, length of time working with dissertation chair, program of study, length of time in the PhD program, military status, length of time in dissertation, employment status, and school of affiliation. Multiple regression analyses were used to determine if the measures of student perception of mentor communication styles and mentor behavior predict dissertation stress and satisfaction.

The following statistical assumptions was tested prior to the multiple regression analysis: linearity, normality, multicollinearity, no auto-correlation, and homoscedasticity. Linearity was tested using a scatterplot in SPSS. Normality was determined by using Q-Q-Plots. Collinearity diagnostics was performed in SPSS to ensure that the independent variables were independent from one another. A Durbin-Watson's *d* test was done to show no auto-correlation. Finally, a standardized residual plot was done to determine homoscedasticity. The research questions that were addressed and the specific hypotheses related to each included the following:

Research Questions

Research Question 1: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness), as measured by the CSI (De Vries et. al., 2013) relate to dissertation student stress (threat, challenge, harm, benign), as measured by the CASS (Devonport & Lane, 2006)?

H₀1: Mentor communication style is not a significant predictor of dissertation student stress.

H₁1: Mentor communication style is a significant predictor of dissertation student stress.

Research Question 2: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness), as measured by the CSI (De Vries et. al., 2013) relate to dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015)?

H₀2: Mentor communication style is not significant predictor of dissertation student satisfaction.

H₁2: Mentor communication style is a significant predictor of dissertation student satisfaction.

Research Question 3: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic

assistance, and professional development), as measured by the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to dissertation student stress, as measured by the CASS (Devonport & Lane, 2006)?

H₀₃: Dissertation chairperson behavior is not significant predictor of student stress.

H₁₃: Dissertation chairperson behavior is a significant predictor of student stress.

Research Question 4: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development), as measured by the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to the overall dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument?

H₀₄: Dissertation chairperson behavior is not significant predictor of overall student satisfaction.

H₁₄: Dissertation chairperson behavior is a significant predictor of overall student satisfaction.

Six communication styles were measured: expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativenness. Five mentor behaviors were measured: work style, personal connection, academic assistance, mentoring abilities, and professional development. Multiple regression analysis was used to determine the relative strength of mentor communication styles and behaviors in predicting dissertation student stress and satisfaction.

Threats to Validity

Quantitative research can be described as more valid and reliable than qualitative or mixed methods approaches due to objective data collection processes (Creswell, 2009). Despite objectivity, there were various threats to both external and internal validity that can arise in this study (Creswell, 2009). According to Creswell (2009), external validity is the extent to which the researcher can conclude that results apply to a larger population and providing generalizability.

There were various threats to external validity that could occur in this study. The first threat to validity was the method of sampling. Because convenience sampling was used, the participants were not randomly selected. Non-random sampling provided weak external validity and likely to be more biased than random samples (Trochim & Donnelly, 2008). Recruiting participants from the Walden University participant pool and social media websites generalized the results to balance the threat to validity that the non-random sample imposed (Tabachnick & Fidell, 2013).

Students having challenges with their dissertation chair or the dissertation process may make up most of the participants. These students may choose to take advantage of this platform to express their opinions, concerns, and/or complaints without the fear of being identified. On the other hand, students who were progressing well in dissertation may be more likely to participate. They may decide that they would like to be a part of another study as a contribution effort. Any of these situations could skew the results and present a misrepresentation of the student population in dissertation.

An internal threat to the validity was that participants may not be truthful if they were still working with their dissertation chair and were experiencing problems or new to working with the dissertation chair. If the student was not satisfied with his/her dissertation chair or did not want to jeopardize the relationship, the student may not answer that question truthfully or may answer in such a haphazard or biased fashion that makes the data not trustworthy. Another factor that threatened the validity was that this survey was based on student perception of mentor communication style and mentor behavior and did not objectively measure mentor communication style and mentor behavior.

Another threat to validity was within the instruments used. The Dissertation Chairperson Satisfaction Survey and the CASS were not validated nor tested for reliability. The intent of the research for the Dissertation Chairperson Satisfaction Survey was exploratory in nature of an un-researched phenomenon, therefore the developer of the research instrument did not establish the psychometric properties of the instrument (Neale-McFall & Ward, 2014). The CASS was a modified version of the Cognitive Appraisal of Health Scale, so the author used the validation and reliability of the original scale (Devonport & Lane, 2006).

Another threat to validity was within the nature of the study and the intended results of the research method. While multiple regression revealed relationships among variables, it cannot be implied that the variables were causal (Spice, 2005). It was sometimes difficult to draw causal relationships in quasi-experimental designs, such as correlational designs (Tabachnick & Fidell, 2013). While I did find that mentor

communication style and mentor behavior were predictors of dissertation student stress and satisfaction that did not mean that they were causal variables. A final threat to validity to consider was that there were multiple sources of stress during dissertation. The singular source of mentors, while important, was not the only factor that predicted student stress and student satisfaction. Although, there were not any personal biases on my part as a researcher, I did acknowledge that I was a dissertation student at Walden University.

Ethical Considerations

I informed participants that they were free to withdraw their consent and end their participation at any time without penalty. Participants needed to give their informed consent to participate in the study via the informed consent form, which also explained their rights and confidentiality of remaining anonymous as participants of this study. Should potential participants experience any feelings of stress during the completion of the surveys, participants were encouraged to access the student's assistance program on the academic's portal on the student page. On the student's assistance program page (<https://my.waldenu.edu/portal/c/19655.htm>), there were free, confidential support, resources, and information that could help the participant address issues such as stress, anxiety, or even depression especially experienced during the dissertation process. There was also a 24-hour hotline to receive confidential counseling.

Participants were advised that all responses would remain confidential. The researcher was the only one with access to the stored data, and that the data was stored for a minimum of five years (American Psychological Association, 2010). Participants

were required to sign the electronic informed consent to indicate that they understood and agreed to the conditions of the study. Using the website Survey Monkey, participants were able to answer questions anonymously and there was no need to use identifying information such as student IDs. Also, in using the participant pool, participants were given a participant identification number, different from their student ID. The anonymous data collection minimized any possible risks to the participants. These steps minimized any discomforts that might be encountered, such as thinking about one's own life stress.

Summary

This quantitative study used a nonexperimental design using survey methodology. The two independent variables that were used in this study were: (1) mentor communication style and (2) mentor behavior. The dependent variables that were used were: (1) dissertation student stress and (2) overall student satisfaction. The participants were limited to dissertation students who have had the same dissertation chair for at least 2 quarters and have been enrolled in at least two quarters of dissertation. Participants completed the Dissertation Chair Satisfaction Survey Instrument, the modified version of the CSI, the CASS as well as the demographic form.

A survey method design using surveymonkey.com was utilized. Multiple regression was used in this non-experimental design to evaluate the relative strength of mentor communication styles (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness) and mentor behaviors (work style, personal connection, academic assistance, mentoring abilities, and professional development) in predicting dissertation student stress and dissertation

student satisfaction. Chapter 4 provided data collection and analysis and presented descriptive and inferential statistics from the multiple regression.

Chapter 4: Results

In this quantitative study, I sought to look at dissertation students' perception of their dissertation chairs' communication style and mentoring behavior as predictors of the students' appraisal of stress and overall dissertation satisfaction. Deci and Ryan's self-determination theory and Lazarus' theory of cognitive appraisal were the theories used to guide this research. The purpose of this study was to determine the extent to which mentor communication styles and mentor behaviors predicted students' appraisal of dissertation stress and overall dissertation satisfaction. The six communication styles measured were expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness. The five mentor behaviors measured were work style, personal connection, academic assistance, mentoring abilities, and professional development. Multiple regression analysis was used to determine the relative strength of mentor communication styles and behaviors in predicting dissertation student stress and satisfaction. This quantitative nonexperimental study was done to assess the predictive relationships between these variables. In Chapter 4, I present the research questions, a description of the data collection, an evaluation of the statistical assumptions, and the results from the multiple regression analyses. The following research questions and hypotheses guided this study.

Research Question 1: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulateness), as measured by the CSI

(De Vries et. al., 2013) relate to dissertation student stress (threat, challenge, harm, benign), as measured by the CASS (Devonport & Lane, 2006)?

H₀₁: Mentor communication style is not a significant predictor of dissertation student stress.

H₁₁: Mentor communication style is a significant predictor of dissertation student stress.

Research Question 2: To what extent does student perception of mentor communication style (expressiveness, preciseness, verbal aggressiveness, questioningness, emotionality, and impression manipulativeness), as measured by the CSI (De Vries et. al., 2013) relate to dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015)?

H₀₂: Mentor communication style is not significant predictor of dissertation student satisfaction.

H₁₂: Mentor communication style is a significant predictor of dissertation student satisfaction.

Research Question 3: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development), as measured by the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to dissertation student stress, as measured by the CASS (Devonport & Lane, 2006)?

*H*₀₃: Dissertation chairperson behavior is not significant predictor of student stress.

*H*₁₃: Dissertation chairperson behavior is a significant predictor of student stress.

Research Question 4: To what extent does student perception of dissertation chairperson behavior (personal connection, work style, mentoring abilities, academic assistance, and professional development), as measured by the Dissertation Chair Satisfaction Survey Instrument (Neale-McFall & Ward, 2015) relate to the overall dissertation student satisfaction, as measured by the overall question on the Dissertation Chair Satisfaction Survey Instrument?

*H*₀₄: Dissertation chairperson behavior is not significant predictor of overall student satisfaction.

*H*₁₄: Dissertation chairperson behavior is a significant predictor of overall student satisfaction.

In this chapter, the actual data collection procedure is described in detail including time frames, procedural changes, response rates, and other relevant information pertaining to the data collection. Basic demographic data of the sample used is presented along with a discussion of external validity. Finally, detailed statistical results are presented.

Data Collection

Data collection began on June 28, 2018 at 3:00 p.m. and ended on August 3, 2018 at 12:00 a.m. As described in Chapter 3, the data collection began with an approved posting on Walden's Participant Pool Electronic Research bulletin board as well as a

Facebook advertisement that solicited all online doctoral students to participate in an online survey. This first draft of the ad ran continuously from June 28 through August 3 while continuously finding more Facebook groups to post the ad. I started with one student-led doctoral group from Walden University and discovered that by using a combination of terms, there were about four other Walden student-led Facebook groups that I requested to join. In each group, I followed the process of requesting to join and then private messaging the administrators of the Facebook page to request permission to add my posting to solicit for members. On July 4, 2018, due to low number of completed surveys, a decision was made to open the participant pool of online doctoral students to not only students at Walden University, but to all online doctoral students (current to recently graduated) from any online university. Although I am not sure of the student total from each online university or even a list of all online universities represented, the Facebook groups that I contacted were Argosy, Capella, Walden, Liberty, University of the Rockies, University of Phoenix, and Nova Southeastern. With this change and contacting over 15 other Facebook groups from various universities, the advertisement ran intermittently until all responses were completed by August 3, 2018.

The original ad (Appendix C) was displayed to Facebook users who were online doctoral students either recently graduated or currently in dissertation. These users had to have been in dissertation for at least 2 quarters, which qualified them to participate in the survey. This ad had 476 attempts with 227 completed surveys. Thirty-four participants completed the survey via the Walden Participant Pool weblink, and 193 completed the survey via the Facebook link. With such a large number of participants from a wide range

of online universities, it was believed that the participants were a diverse representation of online graduate students.

Results

Descriptive statistics for the sample and results of the regression analyses are presented in this section. I calculated means, standard deviations, frequencies, and percentages for the categorical variables. I conducted several multiple linear regressions with the variables of student perception of their dissertation chairs' communication style and dissertation chairs' mentor behavior with dissertation student stress and overall dissertation satisfaction.

Descriptive Statistics

Participants responded to a screening question prior to accessing the measures that comprised the surveys. All participants reported that they were online doctoral students; however, it is possible that some of the students were also recent graduates from the program. All students reported the experience of working on dissertation for at least 2 quarters with the same dissertation chairperson for at least 2 consecutive quarters ($n = 227, 100\%$). This indicated that all of the respondents met the inclusionary criteria for the study. Students were asked to report demographic information regarding their age, gender, marital status, international student status, race/ethnic identity, program of study, and college. Students also responded to the following questions of which dissertation documents had been approved in the dissertation process and if they have had to change dissertation chair and/or committee person during their time in dissertation. Many participants reported that they had at least their proposal approved ($n = 96, 43\%$). More

than half of the participants indicated that they did not have any changes in their original dissertation team ($n = 139, 61\%$). Many of the respondents indicated that they were from either the school of education or the school of psychology ($n= 151, 68\%$). Most of the participants were either African American/Black ($n=99, 44\%$) or European American/Caucasian ($n=94, 42\%$). Most of the student participants were students from the United States ($n=218, 97\%$). Half of the participants reported their marital status as married ($n=116, 53\%$). Many of the student participants were female ($n=186; 83\%$) while the remaining participants were male ($n=37; 16\%$). Most participants in the sample were between the age of 41-57 years of age ($n = 119, 53\%$). Demographic characteristics for participants are presented in Table 2.

Table 2

Frequency Table for Student Participants Demographic Characteristics

Variable	<i>n</i>	%
Changes to Dissertation Committee		
Dissertation Chair	24	11
Dissertation Committee Member	42	19
Dissertation Chair and Committee Member	22	10
No Changes	139	61
Dissertation Documents Approved		
Proposal	100	44
IRB Application	86	39
Final Dissertation	75	34
None	17	8
School of Specialization		
School of Education	78	35
School of Social Work	12	5
School of Management	24	11
School of Health Sciences	14	6
School of Information Sys.	5	2
School of Nursing	2	1
School of Public Policy	8	4
School of Counseling	7	3
School of Psychology	77	34
Gender		
Female	190	84
Male	37	17
International Student		
Yes	9	4
No	218	96
Age		
25 and younger	63	28
26-40	12	5
41-57	123	54
58 and older	29	13
Ethnicity		
African American/Black	99	44
Asian/Pacific Islander	4	2
Caucasian/ White	100	43
Latino	11	5
Other	15	7
Marital status		
Single	61	27
Married	122	54
Separated	4	2
Divorced	37	17
Widowed	3	1

Note. Due to rounding errors, percentages may not equal 100%.

The means and standard deviations for the CSI subscales (assessed student perception of mentor communication style), the CASS subscales (assesses dissertation student stress), and the Dissertation Chair Satisfaction Survey subscales (assessed student perception of mentor behaviors and overall student dissertation satisfaction) are shown in Table 3. The CSI and the Dissertation Chair Satisfaction Survey were the instruments used for the independent variables (student perception of mentor communication style and mentor behaviors). The CASS and the Dissertation Chair Satisfaction Survey were the instruments used to measure the dependent variables in the study (components of dissertation stress and overall dissertation student satisfaction).

There were six subscales on the CSI (modified version). The expressiveness communication style subscale scores ranged from 33 to 60, with an average of 47.97 ($SD = 5.236$). The preciseness communication style subscale scores ranged from 28 to 77, with an average of 58.71 ($SD = 9.290$). The verbal aggressiveness communication style subscale scores ranged from 22 to 71, with an average of 37.01 ($SD=9.134$). The questioningness communication style subscale scores ranged from 22 to 71, with an average of 44.77 ($SD = 7.784$). The impression manipulateness communication style subscale scores ranged from 26 to 66, with an average of 39.85 ($SD=6.672$). The emotionality communication style subscale scores ranged from 16 to 67, with an average of 38.83 ($SD=8.615$).

On the Dissertation Chairperson Satisfaction Survey, the average and standard deviation for the five mentor behavior subscales were calculated (work style, personal connection, academic abilities, mentoring abilities, and professional development). The

mentor behavior subscale of personal connection had an average score of 29.46 ($SD=5.58$). The mentor behavior subscale of work style had an average score of 20.59 ($SD=3.899$). The mentor behavior subscale of academic abilities had an average score of 19.35 ($SD=3.107$). The mentor behavior subscale of mentoring abilities had an average score of 22.22 ($SD=4.646$). The mentor behavior subscale of professional development had an average score of 7.31 ($SD=2.473$).

The average and the standard deviation were calculated for the subscales of the CASS (threat, challenge, harm/loss, benign/irrelevant, and secondary appraisal of stress). The threat subscale had a mean score of 12.35 ($SD=4.477$). The challenge subscale had a mean score of 24.10 ($SD=4.013$). The harm/loss subscale had a mean average score of 21.66 ($SD=4.013$), and benign/irrelevant subscale had a mean average score of 8.37 ($SD=2.175$). Secondary appraisal of stress subscale had a mean average score of 15.90 ($SD=2.377$).

Table 3

Descriptive Statistics for Communication Styles, Mentor Behaviors, and Dissertation Student Stress

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	Min.	Max.
CSI Expressiveness	47.97	5.236	227	33	60
Preciseness	58.71	9.290	227	28	77
Verbal Aggressiveness	37.01	9.134	227	22	71
Questioningness	44.77	7.784	227	23	70
Impression Manipulativeness	39.85	6.672	227	26	66
Emotionality	38.83	8.615	227	16	67
DCSS- Overall Satisfaction	3.32	.943	227	1.00	4.00
Work Style	20.59	3.899	227	7	28
Personal Connection	29.46	5.580	227	10	37
Academic Assistance	19.35	3.107	227	9	24
Mentoring Abilities	22.22	4.646	227	7	28
Professional Development	7.31	2.473	227	3	12
CASS-Threat	12.35	4.477	227	5	33
Challenge	24.10	4.013	227	8	30
Harm/Loss	21.66	7.796	227	8	40
Benign/Irrelevant	8.37	2.175	227	4	16
Secondary	15.90	2.377	227	5	22

Evaluation of Statistical Assumptions

Prior to conducting the multiple linear regression analyses, I assessed the assumptions of normality, homoscedasticity, and multicollinearity. I compared the

calculated values for skewness and kurtosis to the guidelines established to indicate that the data distribution differs from a normal distribution. The critical values were ± 2 for skewness and ± 3 for kurtosis (Westfall & Henning, 2013). When the skewness was greater than or equal to 2 or less than or equal to -2, then the variable was asymmetrical about its mean. When the kurtosis was greater than or equal to 3, then the variable's distribution was markedly different than a normal distribution in its tendency to produce outliers. If the kurtosis was less than 3, then the dataset had lighter tails than a normal distribution (Westfall & Henning, 2013). All scores for each instrument were within the value of the guidelines of kurtosis; therefore, normality was found. The Shapiro-Wilk test was conducted to test for normality. The results of the Shapiro-Wilk test indicated that the data distribution did not differ from a normal data distribution; therefore, the assumption of normality was met. Table 4 presents the results of the Shapiro-Wilk test for normality, skewness and kurtosis.

Table 4

Results of the Normality Testing for the Communication Style Inventory, Dissertation Stress Scale, and Dissertation Satisfaction Survey

	Statistic	<i>df</i>	<i>p</i>	Skewness	Kurtosis
Communication Style					

Expressiveness	.989	227	0.070	-0.214	0.139
Verbal Aggressiveness	.943	227	0	0.944	0.973
Preciseness	.963	227	0	-0.706	0.499
Questioningness	.988	227	0.046	0.195	0.672
Impression Manipulativeness	.980	227	0.003	0.462	0.300
Emotionality	.993	227	0.360	-0.021	0.155
Dissertation Stress					
Threat	.956	227	0	0.81	1.511
Challenge	.947	227	0	-0.80	0.585
Harm/Loss	.969	227	0	0.421	-0.571
Benign/Irrelevant	.973	227	0	0.243	-0.071
Secondary Appraisal	.962	227	0	-0.262	1.750
Dissertation Mentor Behavior					
Work Style	.946	227	0	-0.821	0.533
Personal Connection	.930	227	0	-0.946	0.757
Academic Abilities	.957	227	0	-0.588	0.068
Mentoring Abilities	.918	227	0	-0.957	0.504
Professional Development	.959	227	0	-0.038	0.698

To assess homoscedasticity, I examined a residual scatterplot for the predicted versus standardized data for each of the subscales of the instruments used. The points appeared to be distributed about a mean value of zero and there was no curvature in the plot. Therefore, the assumption of homoscedasticity was met. The following graphs (Figures 1-6) presented the residual scatterplot for homoscedasticity for each of the independent variables.

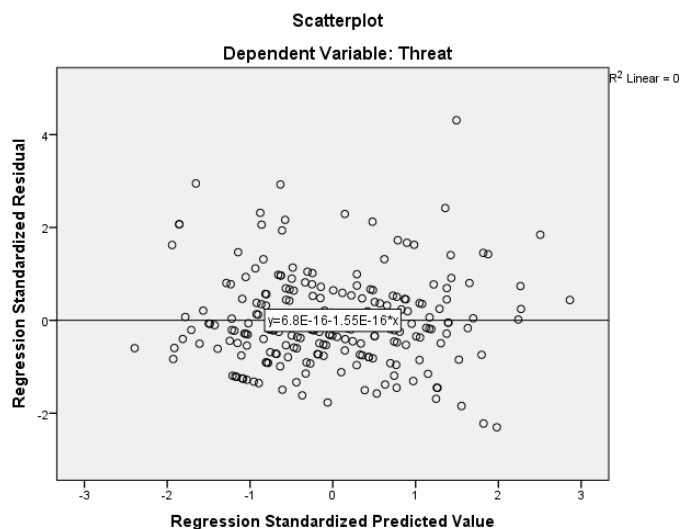


Figure 1. Residual scatterplot for homoscedasticity for Threat

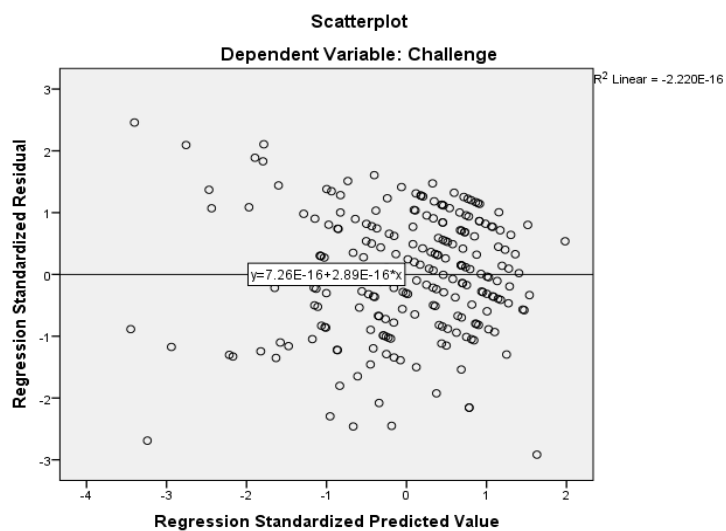


Figure 2. Residual scatterplot for homoscedasticity for Challenge

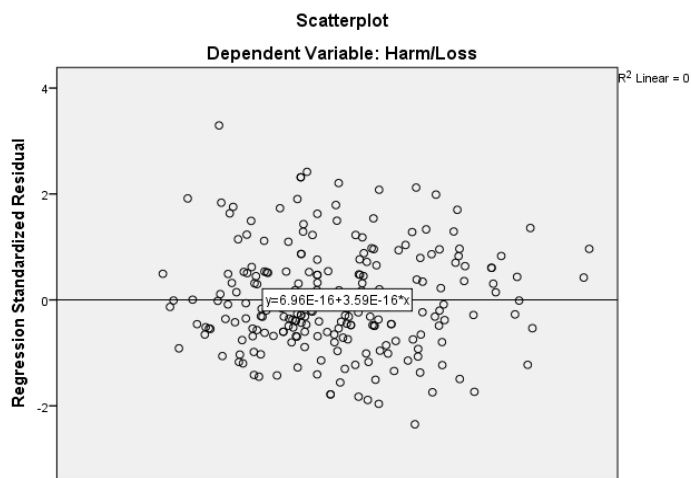


Figure 3. Residual scatterplot for homoscedasticity for Harm/Loss

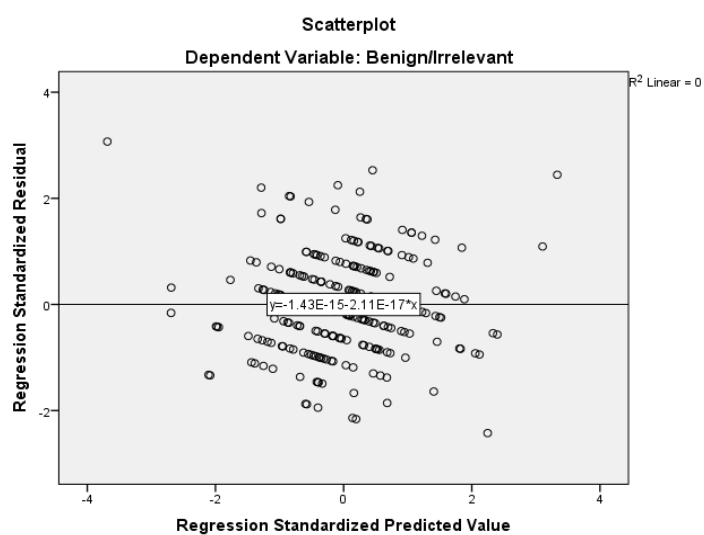


Figure 4. Residual scatterplot for homoscedasticity for Benign/Irrelevant

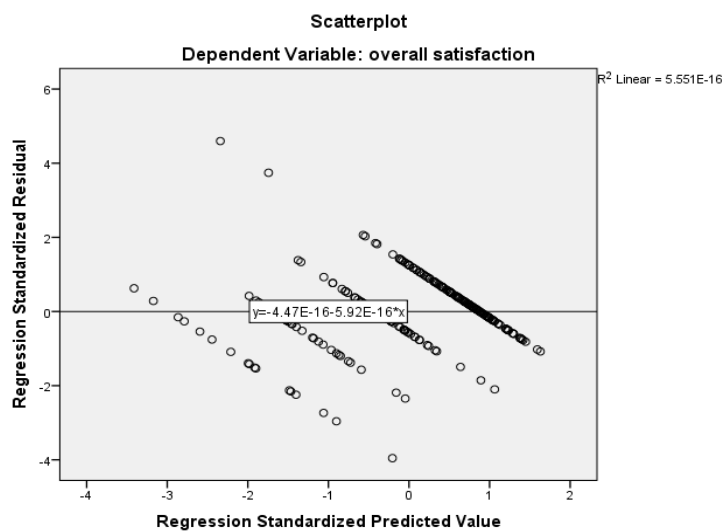


Figure 5. Residual scatterplot for homoscedasticity for Overall Dissertation Satisfaction

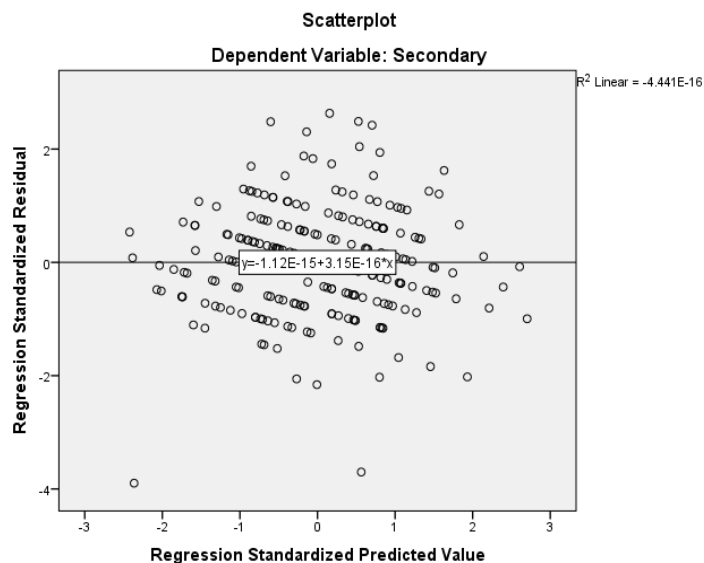


Figure 6. Residual scatterplot for homoscedasticity for Secondary Appraisal

I then calculated Cronbach's alpha to measure for internal consistency. A reliability coefficient of .70 or higher was considered acceptable (Greg & Mallory, 2003). I calculated Cronbach's alpha for each of the subscales of the following instruments: CSI, Dissertation Chair Satisfaction Survey, and CASS. Cronbach's alpha for the subscales of the CSI are as follows: expressiveness ($\alpha=0.430$), preciseness ($\alpha=0.863$), verbal aggressiveness ($\alpha=0.834$), questioningness ($\alpha=0.715$), impression manipulateness ($\alpha=0.685$), emotionality ($\alpha=0.843$). Cronbach's alpha for the Dissertation Chair Satisfaction Survey, mentor behaviors were as follows: work style ($\alpha=0.728$), personal connection ($\alpha=0.843$), academic abilities ($\alpha=0.772$), mentoring abilities ($\alpha=0.892$), and

professional development ($\alpha=0.795$). Cronbach's alpha for the subscales of the CASS were as follows: threat ($\alpha=0.436$), challenge ($\alpha=0.737$), harm/loss ($\alpha=0.872$), benign/irrelevant ($\alpha=0.134$), and secondary appraisal ($\alpha=-0.106$).

Finally, I calculated Variance Inflation Factors (VIFs) for the predictor variables. VIFs reflected the amount of correlation among the predictor variables included in the analysis (Stevens, 2009). I evaluated the VIFs using the benchmarks developed by Menard (2009), where values greater than five indicated issues while values greater than 10 were considered evidence of multicollinearity. For the subscales of the Dissertation Chair Satisfaction Survey-Personal Connection and Mentoring Abilities had a high degree of multicollinearity between the work style response and other mentor behavior subscales. The VIF values for these variables exceeded the cut off for multicollinearity. Because of this high degree of multicollinearity, I included only the total score for stress in the regression analysis (Baguley, 2012). Table 5 presented the VIF values for the predictor variables.

Table 5

VIF Values for the Predictor Variables

Variable	VIF
CSI – Expressiveness	1.074
CSI – Preciseness	2.021

CSI- Questioningness	1.118
CSI- Impression Manipulativeness	2.006
CSI- Emotionality	2.153
CSI- Verbal Aggressiveness	2.156
Dissertation Chair Satisfaction Survey (Mentor Behavior)	
Work Style	3.643
Personal Connection	6.604
Academic Advising	2.453
Mentoring Abilities	7.163
Professional Development	2.037
CASS- Threat	2.205
CASS- Challenge	1.417
CASS- Harm/Loss	1.460
CASS- Benign/Irrelevant	1.038
CASS- Secondary Appraisal	1.262

Multiple Regression Analyses

To address the research questions guiding this study, I conducted multiple linear regression analyses using the standard entry method. The standard method allowed the addition of the predictor variables into the regression model one at a time. The predictor variables from the research questions were mentor communication style (expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativeness, emotionality) and mentor behavior (i.e., work style, personal connection, academic abilities, mentoring abilities, professional development). The dependent variables were

dissertation student stress and overall dissertation student satisfaction. I conducted a total of 6 standard multiple linear regression analyses, one for each subscale of the CASS and one for overall dissertation satisfaction.

Multiple Regression: Communication Styles and Mentoring Behaviors as Predictors of Dissertation Student Stress (Threat Subscale)

I conducted a multiple linear regression analysis to assess the relationship between the predictor variables and the threat subscale of dissertation student stress. The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativenness, emotionality) and mentor behavior (work style, academic assistance, mentoring abilities, personal connection, and professional development). The result of the multiple linear regression was statistically significant, $F(11,215) = 5.167, p < .05, R^2 = 0.209$. This finding indicated that the overall model was statistically significant. The model explained 21% of the variation in dissertation student stress (threat subscale scores). The results were shown in Table 6.

The only significant predictor of dissertation student stress (threat subscale) was the questioningness communication style subscale score, $B = 0.121, p < .05$. The results indicated that as the questioningness communication style scores increased (indicating a communication style that is philosophical, inquisitive, argumentative, or simply unconventional in nature), the dissertation student stress (threat subscale) scores increased. On average, for every one-unit increase in questioningness, there was a 0.121 unit increase in dissertation student stress (threat subscale).

Table 6

Results of the Multiple Linear Regression Predicting Threat in Dissertation Student Stress with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	-0.082	0.055	-.096	-1.488	.138
CSI-Preciseness	0.000	0.045	0.001	0.006	.995
CSI-Verbal Aggressiveness	0.017	0.051	0.035	0.388	.736
CSI-Questioningness	0.121	0.040	0.210	3.007	.003
CSI-Impression Manipulativeness	0.064	0.058	0.095	1.093	.276
CSI-Emotionality	0.018	0.047	0.034	.375	.708
MB-Work Style	-.114	0.152	-.099	-.748	.455
MB- Personal Connection	0.008	0.132	0.010	.064	.949
MB-Academic Assistance	-.249	0.140	-.173	-1.777	.077
MB-Mentoring Abilities	-.033	0.180	-.034	-.181	.856
MB-Professional Development	-.082	0.163	-.045	-.501	.617

Note. $F(11,215) = 5.167, p < .05, R^2 = 0.209$.

Multiple Regression: Communication Style and Mentoring Behavior as Predictors of Dissertation Student Stress (Challenge Subscale)

I conducted another multiple linear regression analysis to assess the relationship between the predictor variables and dissertation student stress (challenge subscale). The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativeness, emotionality) and mentor behavior (work style, academic assistance, mentoring abilities, personal connection, and professional development).

The result of the multiple linear regression was statistically significant, $F(11,215) = 6.575, p < .05, R^2 = 0.252$. This finding indicated that the overall model was statistically significant. The model explained 25% of the variance in dissertation student

stress (challenge subscale scores). The multiple regression results were shown in Table 7. The only significant predictor of dissertation student stress (challenge subscale) was the preciseness communication style subscale score, $B = 0.081$, $p < .05$. The results indicated that as the preciseness communication style scores increased (indicating a communication style that is structured and concise), dissertation student stress (challenge subscale) scores increased. On average, for every one-unit increase in mentoring preciseness, there was a 0.081 unit increase in dissertation student stress (challenge subscale).

Table 7

Results of the Multiple Linear Regression Predicting Challenge in Dissertation Student Stress with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	0.014	0.048	0.018	.283	.777
CSI-Preciseness	0.081	0.039	0.187	2.075	.039
CSI-Verbal Aggressiveness	-.050	0.045	-.113	-1.111	.268
CSI-Questioningness	-.012	0.035	-.023	-.337	.737
CSI-Impression Manipulativeness	-.046	0.051	-.077	-.913	.362
CSI-Emotionality	0.034	0.041	0.072	.828	.409
MB-Work Style	0.195	0.133	0.189	1.467	.144
MB- Personal Connection	0.154	0.115	0.215	1.343	.181
MB-Academic Assistance	0.091	0.122	0.070	.745	.457
MB-Mentoring Abilities	-.095	0.157	-.110	-.608	.544
MB-Professional Development	-.194	0.142	-.120	-1.365	.174

Note. $F(11,215) = 6.575$, $p < .05$, $R^2 = 0.252$

Multiple Regression: Communication Style and Mentoring Behavior as Predictors of Dissertation Student Stress (Harm/Loss Subscale)

I conducted a multiple linear regression analysis to assess the relationship between the predictor variables and dissertation student stress (harm/loss subscale). The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativeness, emotionality) and mentor behavior (work style, academic assistance, mentoring abilities, personal connection, and professional development).

The result of the multiple linear regression was statistically significant, $F(11,215) = 6.505, p < .05, R^2 = 0.25$. This finding indicated that the overall model was statistically significant. The model explained 25% of the variance in dissertation student stress (harm/loss subscale). The multiple regression results were shown in Table 8.

The verbal aggressiveness communication style subscale score was a statistically significant predictor of dissertation student stress (harm/loss subscale), $B = 0.176, p < .05$. The results indicated that as the verbal aggressiveness communication style scores increased (indicating a communication style that is angry, authoritative, derogative, and non-supportive), dissertation student stress (harm/loss subscale) scores increased. On average, for every one-unit increase in verbal aggressiveness, there was a 0.176 unit increase in dissertation student stress (harm/loss subscale).

The mentor behavior subscale of personal connection was a statistically significant predictor dissertation student stress (harm/loss subscale), $B = 0.465, p < .05$. The results indicated that as personal connection scores increased (indicating mentor

behavior that is personable and comfortable to be around, used humor in interactions, student advocate, patient, and invested in the student as a professional), dissertation student stress (harm/loss subscale- damage or stress already experienced as it related to student finances, time away from family and friends, social interaction with peers, etc.) scores increased. On average, for every one-unit increase in personal connection, there was a 0.465 unit increase in dissertation student stress (harm/loss subscale- damage or stress already experienced as it related to student finances, time away from family and friends, social interaction with peers, etc.) The mentor behavior subscale of professional development was a statistically significant predictor of dissertation student stress (harm/loss subscale), $B = -0.877$, $p < .05$. The results indicated that as professional development scores increased (indicating mentor behavior that proactively integrated students into the profession), dissertation student stress (harm/loss subscale) scores decreased. On average, for every one-unit increase in professional development, there was a -0.877 unit decrease in dissertation student stress (harm/loss subscale).

Table 8

Results of the Multiple Linear Regression Predicting Harm/Loss in Dissertation Student Stress with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	-0.024	0.094	-.016	-.259	.796
CSI-Preciseness	0.030	0.076	0.036	.395	.693
CSI-Verbal Aggressiveness	0.176	0.087	0.206	2.030	.044
CSI-Questioningness	0.046	0.068	0.046	.672	.502
CSI-Impression Manipulativeness	0.229	0.099	0.196	2.323	.321
CSI-Emotionality	0.070	0.079	0.077	.878	.381
MB-Work Style	-.320	0.258	-.160	-1.241	.216
MB- Personal Connection	0.465	0.224	.333	2.082	.039
MB-Academic Assistance	-.313	0.237	-.125	-1.319	.189
MB-Mentoring Abilities	-.0113	0.305	.068	.371	.711
MB-Professional Development	-.887	0.277	-.278	-3.169	.002

Note. $F(11,215) 6.505, p < .05, R^2 = 0.25$

Multiple Regression: Communication Style and Mentoring Behavior as Predictors of Dissertation Student Stress (Benign/Irrelevant Subscale)

I conducted a multiple linear regression analysis to assess the relationship between the predictor variables and benign/irrelevant subscale of dissertation student stress. The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativeness, emotionality) and mentor behavior (work style, academic assistance, mentoring abilities, personal connection, and professional development).

The result of the multiple linear regression was statistically significant, $F(11,215) = 2.688, p < .05, R^2 = 0.121$. This finding indicated that the overall model was statistically significant. The model explained 12% of the variance in the appraisal of

benign/irrelevant subscale of dissertation student stress. The multiple regression results were shown in Table 9.

The questioningness communication style subscale was a statistically significant predictor of dissertation student stress (benign/irrelevant subscale- dissertation stress did not have any effect on the person's well-being), $B = -0.042$, $p < .05$. The results indicated that as the questioningness communication style scores increased (indicating a communication style that is philosophical, inquisitive, argumentative, or simply unconventional in nature), dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being) scores decreased. For this subscale, high scores on the subscale indicated that the student did not appraise dissertation stress as affecting his/her well-being and low scores indicated that the student did appraise dissertation stress as affecting his/her well-being. On average, for every one-unit increase in questioningness communication style, there was a 0.042 unit decrease in dissertation student stress (benign/irrelevant subscale).

The mentor behavior subscale of academic assistance was a statistically significant predictor of dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being), $B = -0.191$, $p < .05$. The results indicated that as academic assistance scores increased (indicating a mentor with a thriving reputation for publishing and someone well educated in methodology), dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being) scores decreased. For this subscale, high scores on the subscale indicated that dissertation did not affect the student's well-being and low scores indicated that dissertation did affect the

student's well-being. On average, for every one-unit increase in academic assistance, there was a 0.191 unit decrease in dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being). The mentor behavior subscale of professional development was a statistically significant predictor dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being), $B = 0.216$, $p < .05$. The results indicated that as the mentor behavior professional development scores increased (indicating mentor behavior that proactively integrated students into the profession), dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being) scores increased. On average, for every one-unit increase in personal connection, there was a 0.216 unit increase in dissertation student stress (benign/irrelevant subscale- did not have any effect on a person's well-being).

Table 9

Results of the Multiple Linear Regression Predicting Benign/Irrelevant in Dissertation Student Stress with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	-0.026	0.028	-.062	-.903	.367
CSI-Preciseness	0.011	0.026	0.047	.431	.667
CSI-Verbal Aggressiveness	-0.024	0.023	-.101	-1.039	.300
CSI-Questioningness	-0.042	0.021	-.150	-2.034	.043
CSI-Impression Manipulativeness	-0.013	0.024	-.053	-.557	.578
CSI-Emotionality	0.036	0.030	0.110	1.203	.230
MB-Work Style	0.067	0.078	0.120	.856	.393
MB- Personal Connection	-.018	0.068	-.046	-.266	.791
MB-Academic Assistance	-.191	0.072	-.272	-2.659	.008
MB-Mentoring Abilities	0.129	0.092	0.276	1.405	.162
MB-Professional Development	0.216	0.084	0.245	2.583	.010

Note. $F(11,215) 2.688$, $p < .05$, $R^2 = 0.121$

Multiple Regression: Communication Style and Mentoring Behavior as Predictors of Dissertation Student Stress (Secondary Appraisal Subscale)

I conducted a multiple linear regression analysis to assess the relationship between the predictor variables and the appraisal of secondary stress in dissertation students. The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression manipulativeness, emotionality) and mentor behavior (work style, academic assistance, mentoring abilities, personal connection, and professional development).

The result of the multiple linear regression was statistically significant, $F(11,215) = 3.044$, $p < .05$, $R^2 = 0.135$. This finding indicated that the overall model was statistically significant. The model explained 13% of the variance in the secondary appraisal of dissertation student stress. The results were shown in Table 10.

The questioningness communication subscale was a statistically significant predictor of secondary appraisal of dissertation student stress, $B = 0.062$, $p < .05$. The results indicated that as the questioningness communication style scores increased (indicating a communication style that is philosophical, inquisitive, argumentative, or simply unconventional in nature), secondary appraisal of dissertation student stress scores increased. On average, for every one-unit increase in questioningness mentoring communication style, there was a 0.062 unit increase in the secondary appraisal of dissertation student stress. The emotionality communication subscale was a statistically significant predictor of secondary appraisal of dissertation student stress, $B = 0.065$, $p <$

.05. The results indicated that as the emotionality communication subscale scores increased (indicating a communication style that is worrisome, sentimental, tense, and offensive), secondary appraisal of dissertation student stress scores increased. On average, for every one-unit increase in emotionality, there was a 0.065 unit increase in secondary appraisal of dissertation student stress.

Table 10

Results of the Multiple Linear Regression Predicting Secondary Appraisal in Dissertation Student Stress with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	-0.023	0.031	-.050	-.735	.453
CSI-Preciseness	-0.008	0.028	-.029	-.264	.792
CSI-Verbal Aggressiveness	0.032	0.025	0.123	1.273	.204
CSI-Questioningness	0.062	0.022	0.203	2.774	.006
CSI-Impression Manipulativeness	0.026	0.026	0.095	1.013	.312
CSI- Emotionality	0.065	0.032	0.184	2.026	.044
MB-Work Style	-0.037	0.085	-.060	-.435	.664
MB- Personal Connection	-.0127	0.073	0.299	1.738	.084
MB-Academic Assistance	-.117	0.078	-.153	-1.506	.134
MB-Mentoring Abilities	-.037	0.100	-.073	-.374	.709
MB-Professional Development	-.164	0.091	-.171	-1.815	.071

Note. $F(11,215) 3.044, p < .05, R^2 = 0.135$

Multiple Regression: Communication Styles and Mentoring Behaviors as Predictors of Overall Student Satisfaction

I conducted a multiple linear regression analysis to assess the relationship between the predictor variables and overall dissertation satisfaction. The predictor variables for the multiple linear regression were mentor communication style (i.e., expressiveness, verbal aggressiveness, preciseness, questioningness, impression

manipulativeness, emotionality) and mentor behavior (work style, personal connection, academic assistance, mentoring abilities, and professional development). The result of the multiple linear regression was statistically significant, $F(11,215) = 41.944$, $p < .05$, $R^2 = 0.682$. This finding indicated that the model explained 68% of the variation in overall dissertation satisfaction. The outcome was shown in Table 11.

The impression manipulativenness communication style subscale was the only communication style that was a statistically significant predictor of overall dissertation satisfaction, $B = -0.017$, $p = .027$. The results indicated that as impression manipulativenness scores increased (indicating a communication style that is manipulative in order to obtain status or reward), overall satisfaction with dissertation scores decreased. On average, for every one-unit increase in impression manipulativenness communication style score, there was a -0.017-unit decrease in overall dissertation satisfaction.

Several mentoring behavior subscales were found to be significant predictors of overall dissertation satisfaction. The mentoring behavior subscale of academic assistance was a statistically significant predictor of overall dissertation satisfaction, $B = 0.041$, $p < .05$. The results indicated that as academic assistance scores increased (indicating a mentor with a thriving reputation for publishing and someone well educated in methodology), overall dissertation satisfaction scores increased. On average, for every one-unit increase in the academic assistance score, there was a 0.041-unit increase in overall satisfaction with dissertation. The mentoring behavior subscale of mentoring abilities was a statistically significant predictor of overall dissertation satisfaction, $B =$

0.049, $p < .05$. The results indicated that as mentoring abilities mentor behavior style scores increased (indicating a mentor that act as a role model in professional and personal matters, accessible, and individually tailors guidance), overall dissertation satisfaction scores increased. On average, for every one-unit increase in mentoring abilities mentor behavior style, there was a 0.049 unit increase in overall dissertation satisfaction. Results also showed that the mentoring behavior subscale of personal connection was significant, $B=0.043$, $p<.05$. The results indicated that as personal connection behavior style scores increased (indicating mentor behavior that is personable and comfortable to be around, used humor in interactions, student advocate, patient, and invested in the student as a professional), overall dissertation satisfaction scores increased. For every one-unit increase in personal connection mentor behavior style, there was a 0.043 unit increase in overall dissertation satisfaction.

Table 11

Results of the Multiple Linear Regression Predicting Satisfaction with Communication Style and Mentor Behavior

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
CSI-Expressiveness	-0.003	0.007	-.014	-.351	.726
CSI-Preciseness	0.008	0.006	0.078	1.325	.187
CSI-Verbal Aggressiveness	-.012	0.007	-.118	-1.780	.077
CSI-Questioningness	-.004	0.005	-.034	-.763	.447
CSI-Impression Manipulativeness	-.017	0.008	-.123	-2.232	.027
CSI- Emotionality	0.007	0.006	0.067	1.181	.239
MB-Work Style	0.038	0.020	0.158	1.884	0.061
MB- Personal Connection	0.012	0.018	0.073	0.697	0.486
MB-Academic Assistance	0.041	0.019	0.136	2.204	0.029
MB-Mentoring Abilities	0.049	0.024	0.242	2.043	0.042
MB-Professional Development	0.043	0.022	0.114	1.989	0.048

Note. $F(11,215) = 41.944$, $p < .05$, $R^2 = 0.682$.

Summary

I investigated the predictive relationship between mentor communication styles, mentor behaviors, and overall dissertation student satisfaction and stress. I conducted multiple linear regression analyses to determine if there was a statistically significant relationship between the predictor variables and criterion variables. The predictor variables communication style (expressiveness, preciseness, verbal aggressiveness, aggressiveness, questioningness, impression manipulatives, and emotionality) on the Communication Style Inventory and mentor behavior (work style, academic abilities, personal connection, professional development, and mentor abilities) on the Dissertation Chair Satisfaction Survey. The criterion variables were dissertation student stress (threat, challenge, harm/loss, benign/irrelevant, and secondary) on the Cognitive Appraisal of Dissertation Student Stress and overall student satisfaction on the Dissertation Chair Satisfaction Survey.

The questioningness communication style was a significant predictor of student stress of threat. The preciseness communication style was a significant predictor of student stress of challenge. The verbal aggressiveness communication style, personal connection, and professional development were significant predictors of student stress of harm/loss. The questioningness communication style, academic abilities, and professional development were significant predictors of student stress of benign/irrelevant. The questioningness communication style and the emotionality communication style were significant predictors of student stress of secondary. Finally, impression manipulateness communication style, academic abilities, mentoring abilities, and personal connection

were significant predictors of overall dissertation satisfaction. In Chapter 5, an interpretation of the findings, the limitations of the study, and recommendations for future research was presented.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to determine if student perception of dissertation chair/mentor's communication style and dissertation chair/mentor behaviors could be used to predict dissertation student stress and overall dissertation satisfaction. The relationship between doctoral students and their chairpersons can impact or attribute to students' successful completion of their dissertation (Neale-McFall & Ward, 2015). The relationship between doctoral student and their chairs impacts the students' separation from the program of study without their degree (Neale-McFall & Ward, 2015). Furthermore, the role of the dissertation chair is to guide the doctoral student through the doctoral journey through personal engagement that requires experience and expertise (Black, 2017).

Previous researchers have discussed the role of dissertation chair/mentors and how important their influence is to the doctoral student from a qualitative method of research. However, there has been little quantitative research on which components of mentoring (i.e., mentor communication style and mentor behavior) influence doctoral student stress and satisfaction (Brill, Balcanoff, Land, Gogarty, & Turner, 2014; Schichtel, 2010). The quantitative data in this study were analyzed using standard multiple linear regression analyses. I identified components of dissertation chair/mentor communication style and dissertation chair/mentor behavior as significant predictors of dissertation student cognitive appraisal of stress and overall dissertation satisfaction. In this chapter, I discuss the findings of this study in the interpretation of findings section. I

also discuss the limitations of this study, followed by recommendations for future research and implications for social change. The chapter ends with conclusions for this study.

Interpretation of the Findings

Hypothesis 1

In online doctoral programs, the environment presents additional challenges when compared to that of programs that allow for face-to-face interactions between the dissertation chair/mentor and the dissertation student. Challenges faced by both student and chair include not meeting in person, working in different time zones, and communicating through various technologies where the tone of voice or body language may be missing during communication (Kumar & Johnson, 2017). Challenges faced solely from the perspective of the doctoral student include isolation due to lack of communication, miscommunication due to the textual and nonverbal nature of online communication, the difficulties establishing trust online, technical problems, and insufficient online communication competence on the part of the mentor or mentee (Ensher, Heun, & Blanchard, 2003). Being able to address this issue as well as identify strategies and techniques used to mentor doctoral students in online environments is an apparent need (Kealy & Mullen, 2003). Effective communication between dissertation chair/mentor and the doctoral student is not only essential in overcoming challenges experienced in this setting of academic interaction, but it is important to the success of the doctoral student obtaining his/her doctoral degree (Kumar & Johnson, 2017).

In this study, I found that the questioningness communication style was a significant predictor of the student appraisal of threat in dissertation stress. As the questioningness scores increased, the appraisal of threat in dissertation student stress scores increased. Higher scores on the appraisal of threat subscale indicated that the student appraised that the stress from dissertation will cause future harm (Devonport & Lane, 2006). Higher scores of questioningness communication subscale indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that was unconventional, philosophical, inquisitive, or argumentative (de Vries et al., 2009). I found that dissertation students who perceived their dissertation chair/mentor to have a questioningness communication style appraised stress from dissertation as a threat that may cause future harm to their wellbeing. This communication style from the viewpoint of the dissertation chair is a communication style that is straightforward in its approach with the goal of helping students meet all of the expectations needed for approval of each document to their committee. The idea is to challenge the quality of writing of the student until it meets the standards of a quality paper that will be approved without rewriting or revisions and edits. Kumar and Johnson (2017) stated that dissertation chairs stated that they believed in providing honest, constructive, analytical, inquisitive, and concrete feedback that would help the student move through dissertation, which forces the student to think in depth with precise wording and provide detailed information. The participants in that study stated that the purpose of their feedback is to get students ready for committee and final approval (Kumar & Johnson, 2017). The dissertation chairs in that study expressed that they felt like they would not serve in their

position well if the student submits documents to their committee only to have to rewrite or completely start over (Kumar & Johnson, 2017). For these reasons, the approach can be perceived as aggressive and, in some instances, cause the student to perceive stress from the constant barrage of questions that demand clarity and preciseness from the student. This type of communication style (questioningness) can be perceived as insensitive towards the feelings of the student, especially when the student may not understand the direction of his/her writing or how his or her writing has not met the expectations acceptable for a quality dissertation.

I found that the preciseness communication style was a significant predictor of the appraisal of challenge in dissertation student stress. As the preciseness scores increased, the appraisal of challenge in dissertation student stress scores increased. Higher scores on the appraisal of challenge stress subscale indicated that the dissertation student appraised dissertation as positive stress because the student expects the stressor to lead to greater expectations (Devonport & Lane, 2006). Higher scores of preciseness indicated that the dissertation student perceived that his/her dissertation chair communicates in such a way that is structured, thoughtful, has substantiated input, and was concise (de Vries et al., 2009). I found that dissertation students who perceived their dissertation chair/mentor as having a preciseness communication style appraised the stress from dissertation as a challenge that would positively impact their future because of greater expectations of their wellbeing.

The verbal aggressiveness communication style was a significant predictor of the appraisal of harm/loss in dissertation student stress. As the verbal aggressiveness score

increased, the appraisal of harm/loss in dissertation student stress increased. Higher scores on the appraisal of harm/loss indicated that the dissertation student appraised dissertation as a current stressor and as an event that had already caused them to experience stress-related harm from the dissertation process (Devonport & Lane, 2006). Higher scores of verbal aggressiveness communication style indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that was angry, authoritative, derogative, and nonsupportive (de Vries et al., 2009). It suggested that dissertation students who perceived their dissertation chair/mentor to have a verbal aggressiveness communication style appraised stress from dissertation as harm/loss in which they had already experienced damage from the dissertation process. It is possible that students who perceived their dissertation chair as angry, authoritative, derogative, and nonsupportive may also have viewed the dissertation as harm/loss due to the strains placed on them financially, socially, emotionally, and academically. This added factor may be a determining factor in causing students to separate from the program prematurely.

The questioningness communication style was a significant predictor of the appraisal of benign/irrelevant in dissertation student stress. As the questioningness scores increased, the appraisal of benign/irrelevant in dissertation student stress decreased. Higher scores of questioningness indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that was unconventional, philosophical, inquisitive, and argumentative (de Vries et al., 2009). Higher scores of the appraisal of benign/irrelevant indicated that the dissertation student appraised dissertation

as not influencing their wellbeing (Devonport & Lane, 2006). I found that dissertation students who perceived their dissertation chair/mentor to have a questioningness communication style appraised the dissertation as stressful or did not appraise the dissertation as benign/irrelevant. Dissertation students who perceived their dissertation chair/mentor to have a questioningness communication style appraised dissertation as threatening to their wellbeing. The intensity of the demands to have a quality dissertation paper for any student at any level of their writing, is stressful.

The questioningness and emotionality communication styles were significant predictors of secondary appraisal in dissertation student stress. As the questioningness and the emotionality scores increased, secondary appraisal of stress increased. Higher scores of questioningness indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that is unconventional, philosophical, inquisitive, or argumentative (de Vries et al., 2009). Higher scores of emotionality indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that is sentimental, worrisome, tense, and defensive (de Vries et al., 2009). Higher scores of secondary appraisals indicated that the dissertation student developed feelings that would be helping in dealing with the stressor or with the stress, the dissertation produced (Devonport & Lane, 2006). I found that dissertation students who perceived their dissertation chair/mentor to have a questioningness communication style or an emotionality communication style secondarily appraised dissertation and found or developed ways to cope/deal with dissertation and combat the stress dissertation produced.

Two of the communication style subscales did not significantly predict any of the components of student appraisal of dissertation stress. These subscales included: expressiveness (talkative, dominates the conversation as a mentor, uses humor, and informal with their communication) and impression manipulateness (manipulative in order to gain good impressions from other, used charm, inscrutable, and concealed information). The communication style of expressiveness did not appear to be considered a communication style related to stress. On the other hand, impression manipulateness while not a significant predictor of stress was a significant predictor of overall dissertation satisfaction. Based on the results of the study, it appeared that impression manipulateness and expressiveness did not significantly predict stress relative to the other communication styles that did predict higher levels of stress (questioningness and emotionality).

Hypothesis 2

Prior research has found that several factors have led to student satisfaction of dissertation which are included, but not limited to: frequent interaction time with their supervisor, less distant ways of communication, giving more substantive and concise critiques of work that is non-contradictory of previous directives, and more availability of the supervisor or mentor (Harrison et al., 2014). The challenges of communicating online experienced by dissertation chair/mentors may be a contributing factor of frustration experienced by the dissertation student, which include but are not limited to, the constraints on feedback or suggestions for edits being misunderstood due to the lack of assistance of body language or facial expressions (Kumar & Johnson, 2017). Because of

the time-consuming factor of thoroughly reviewing papers that could be done faster in a face- to- face meeting, it is almost impossible for chairs to respond quickly to students (Neale-McFall & Ward, 2015). This delay in communication and responding in a timely manner with constructive feedback led to student dissatisfaction and prohibited students from building student self-efficacy (Neale-McFall & Ward, 2015).

I found that the impression manipulateness communication style was a significant predictor of overall dissertation satisfaction. Results indicated that as impression manipulateness scores increased, levels of overall dissertation satisfaction scores decreased. Higher scores of impression manipulateness indicated that the dissertation student perceived that his/her dissertation chair communicated in such a way that was manipulative to gain a good impression, charming, inscrutable, and concealing information (de Vries et. al., 2009). The results from this study suggested that dissertation students that perceived their dissertation chair/mentor to have an impression manipulateness communication style had lower overall dissertation satisfaction scores. This finding supported previous research in which several dissertation students stated that their chairs concealed information that was vital to their finishing their project (Harrison et al., 2014). Some students expressed frustration at the lack of availability of their mentor and that the information was not properly communicated (i.e. long gaps in communication that the student was not aware of or not available during the holiday in the time leading up to deadlines in dissertation) (Harrison et al., 2014).

Several of the communication style subscales did not significantly predict overall student dissertation satisfaction. These subscales included: expressiveness (talkative,

dominates the conversation as a mentor, uses humor, and informal with their communication), preciseness (structured, thoughtful, input is substantive, and concise), verbally aggressiveness (angry, authoritative, derogative, and non-supportive), questioningness (unconventional, philosophical, inquisitive, and argumentative), and emotionality (sentimental, worrisome, tense, defensive). The only communication style that was a significant predictor was impression manipulateness.

Student dissertation satisfaction was evaluated with only a single question. A key component of overall satisfaction with dissertation is most likely related to whether or not students were making progress with dissertation. In other words, the length of time students remained at each stage of dissertation writing may have contributed to their satisfaction levels. If the student stayed at the proposal level for several quarters, then the student may not have been as satisfied with dissertation compared to students who had been at the proposal stage for fewer quarters (one or two quarters). Thus, time in dissertation may be a more important factor of dissertation satisfaction than communication style, and this research study did not explore the variable of student time in dissertation.

Hypothesis 3

Research on dissertation chair/mentor behaviors and its impact on the quality of the dissertation chair/mentor-dissertation student relationship has been limited, especially when related to its influence on dissertation student stress (Ramon & Burte, 2012). Even though mentor behavior can have an impact on dissertation student stress, it is unclear which mentor behavior was most effective for predicting the appraisal levels of

dissertation student stress. Much of the previously published research has indicated that the amount of time faculty spent interacting with students, the location of interactions (formal vs. informal settings), and the quantity of work and social interactions with students are all contributing factors that influence overall dissertation satisfaction for doctoral students (Neale-McFall & Ward, 2015).

Results from this study indicated that the personal connection subscale of mentor behavior was a significant predictor in the appraisal of stress as harm/loss. Higher scores on the appraisal of harm/loss stress subscale indicated that the dissertation student appraised dissertation stress as damage already experienced in terms of finances, social connections, time, energy, etc. (Devonport & Lane, 2006). The experience of dissertation could be exaggerated meaning that the student has been in dissertation for several terms and the long periods of time used in the writing process, the amount of financial resources given, and the lack of social interactions has already been experienced. Personal connection was characterized as a mentor behavior that is personable and comfortable to be around, using humor in their interactions, advocating for the student, patient with student progress, investing in the student as a professional and demonstrating genuine care for students (Neale-McFall & Ward, 2015). As personal connection scores increased, dissertation student stress (harm/loss subscale) scores increased. This suggested that when students perceived a personal connection with his/her mentor, they had a higher appraisal of dissertation stress as harm/loss. As the dissertation chair spent more time with the student working on dissertation, other aspects of the student's life outside of dissertation suffered and more financial resources are needed. Students

continued to progress through dissertation towards completion because their mentor continued to support them through the process. Students have become dependent upon the chair as their only motivation to continue progressing through dissertation (Lyness et. al., 2013). On the other hand, if the mentor did not display the expected behavior towards the student that would motivate the student, then the dissertation student may not remain involved or engaged in the activity, stop working on the activity, or abandon the project focusing on those assessed losses in dissertation (in terms of time, finances, emotional support, academic support) as no longer an investment (Hong et. al., 2011; Vallerand & Bissonnette, 1992).

The professional development subscale of mentor behavior was also a significant predictor of the cognitive appraisal of stress as harm/loss. Higher scores on the appraisal of harm/loss stress subscale indicated that the dissertation student appraised dissertation as damage already experienced in terms of finances, social connections, time, energy, etc. (Devonport & Lane, 2006). Professional development was defined as proactively integrating students into the profession (Neale-McFall & Ward, 2015). The results indicated that as professional development scores increased, dissertation student stress (harm/loss subscale) scores decreased. This suggested that the dissertation students who reported their dissertation chair/mentor as proactively integrating them into the profession, had lower scores of harm/loss on the appraisal scale.

The academic assistance subscale of mentor behavior was a significant predictor of the cognitive appraisal of stress as benign/irrelevant. Higher scores on the appraisal of benign/irrelevant stress subscale indicated that the dissertation student appraised

dissertation as not having any effect on his/her/ person's well-being (Devonport & Lane, 2006). Academic assistance was defined as someone with a thriving reputation for publishing and well educated in methodology (Neale-McFall & Ward, 2015). The results indicated that as academic assistance scores increased, dissertation student stress (benign/irrelevant subscale) scores decreased. In other words, if chairs were well established in publication or an expert in a certain methodology, the dissertation student found working with their chair as stressful or appraising the stress of dissertation affecting them in some way. This suggested that dissertation students who reported their dissertation chair/mentor as someone who was established in publication and as an expert in a certain methodology, appraised dissertation as stressful (Lovallo, 2004). An appraisal of benign/irrelevant means that the student does not appraise dissertation as affecting them in any way. Kumar and Johnson (2017) reported that some dissertation chairs/mentors struggled to mentor students with research methodologies outside of their area of expertise. They reported that dissertation chairs/mentors feared that their limitations or biases for a preferred methodology interfered with their effectiveness in assisting their mentee that changed or hindered the direction of the research (Kumar & Johnson, 2017). Furthermore, some dissertation chairs/mentors emphasized the struggles of training dissertation students to write at a level of detail expected in dissertation in an online setting as time consuming and taxing (Kumar & Johnson, 2017). All of these factors could be attributed to frustrations that may be transferred to the student causing the student to experience stress in the relationship.

Professional development was also a significant predictor of the cognitive appraisal of stress as benign/irrelevant. Higher scores on the appraisal of benign/irrelevant stress subscale indicated that the dissertation student appraised dissertation as not having any effect on his/her/ person's well-being (Devonport & Lane, 2006). As the professional development scores increased, dissertation student stress (benign/irrelevant subscale) scores increased. This suggested that dissertation students who reported that their dissertation chair/mentor proactively integrated them into the profession, appraised dissertation as less stressful. Student integration into the profession could include detailing the process of dissertation, communicating expectations and roles of each committee member, planning the dissemination of published work and/or suggesting opportunities for entry into the field once receiving the final degree (Kate, 2016; Kumar & Johnson, 2017).

Two mentor behaviors were not significant predictors of any of the subscales for student stress. These subscales included: work style (provided appropriate structure, held me accountable and on track, provided effective feedback, and discussed expectations prior to the working relationship) and mentoring abilities (acted as a role model in professional and personal matters, accessible and individually tailored guidance). During my research, I found that all of the online universities had dissertation resource materials (e.g. dissertation guidebook, writing center, dissertation checklist, course syllabi, books and journals on dissertation expectations, etc). These dissertation resources found at doctoral level institutions all provided support in terms of writing assistance, explanation of committee role and responsibilities, as well as expectations of dissertation students.

These resources when used by dissertation students may have been a source that alleviated dissertation stress. Therefore, the dissertation chair behaviors (i.e. mentoring abilities and work style) that would have impacted dissertation stress were not extensively experienced by the dissertation student. It appeared that the most important mentoring behaviors related to dissertation stress for dissertation students were behaviors that focused on developing scholarly writing (i.e. the mentoring behaviors of academic assistance and professional development).

Hypothesis 4

Research has indicated that the relationship between the doctoral student and the chairperson was a key element in determining the student's success in completing his or her degree (Bloom et al., 2007). Current findings supported previous research that students were more satisfied with dissertation when they perceived that their chairs explained expectations up front and that their chairs had a genuine care and regard for them as students (Bloom et. al., 2007; Golde, 2005).

I found that the mentor behavior of academic assistance was a significant predictor of overall dissertation satisfaction. This suggested that the dissertation students who reported their dissertation chair/mentor as someone who was well established in publication had higher levels of overall dissertation satisfaction scores. This result supported previous research which found that students expected their chair to be experts in the field of research or in methodology practices (Storms et. al., 2011). Wallace (2000) researched student–chairperson relationships and found that similar research interests

were the one of the most common factors of establishing a meaningful relationship during the dissertation process.

Mentoring abilities was also significant predictor of overall dissertation satisfaction. Mentoring abilities was defined as acting as a role model in professional and personal matters, being accessible, and individually tailoring guidance (Neale-McFall & Ward, 2015). The results indicated that students who reported their chair as a role model in professional and personal matters, being accessible, and providing guidance reported higher levels of overall dissertation satisfaction. Personal connection was also a significant predictor of overall dissertation satisfaction. Personal connection was defined as an individual that exhibited a behavior that was personable and comfortable to be around, used humor in interactions, an advocate, patient with the student's progress, invested in the student as a professional, and demonstrated genuine care for students (Neale-McFall & Ward, 2015). The results indicated that students that reported having a personal connection with their mentor had higher levels of overall dissertation satisfaction. Researchers have found that the self-paced process of dissertation work is one of the issues related to dropout rates, but the addition of facilitation through mentorship could help to increase the graduation rate to 73% (Andrews, 2016).

Only two of the mentor behavior subscales were not significant predictors of dissertation student overall dissertation satisfaction. Those subscales included professional development (described as someone proactively integrating students into the profession) and work style (described as someone who provided appropriate structure, held the student accountable and on track, provided effective feedback, and discussed

expectations prior to the working relationship). At this phase of student progress, the focus is student completion. With so much time spent on scholarly writing for each dissertation student, there may not be much additional time to devote to post-doctoral discussions with students (Marshall et. al., 2017 & Ondrusek, 2012). During the dissertation writing process, dissertation chairs may give more attention to addressing and correcting student's grammatical errors whereas in the ideal situation, attention should be focused on developing student's ability to write scholarly. Therefore, the dissertation chair may not have many opportunities to work with students beyond the writing and editing process. With so much focus on keeping students engaged in dissertation writing and in doing so remotely, conversations about professional development may be limited (Black, 2012). Another challenge dissertation chairs meeting with students online may have could be the amount time given to each student. Some dissertation chairs may have a higher student to chair ratio than others and dissertation chairs work with students at varying levels of dissertation progress. This variable could also limit conversations about professional developing students to enter the profession after graduation. Although, professional development as a mentoring behavior is important, the mentoring behavior may not be as important as the other mentoring behaviors used to assist online students (many of whom are working adults) focus on scholarly writing and finishing dissertation.

Work style was another mentor behavior that was not a significant predictor of overall student dissertation satisfaction. Due to the variety of resources available to the student (course readings, syllabus, supplemental material, etc.), the need for the dissertation chair to explain committee member roles in dissertation, student

expectations, and the structure of dissertation may have been alleviated. These resources when used effectively by the chair and student track student progress, provide the structure needed to develop a quality dissertation paper, hold the student accountable for their own progress, is used as a guideline to provide feedback of student writing, as well as explain student and chair expectations.

Theoretical Framework and Research Findings

The theoretical frameworks for this study were the cognitive appraisal theory and self-determination theory (Deci & Ryan, 1985; Lazarus, 1991). Cognitive appraisal was defined as the process that an individual evaluates for meaning and significance in comparing what takes the individual out of his/her own standard of equilibrium of his/her well-being (Lazarus & Folkman, 1984). If a person appraised his or her relationship to the environment in a way that creates uncertainty of the outcome (e.g., as facing uncertain threat), then emotions associated with that appraisal of stress was displayed, for example, anxiety (Lazarus, 1991).

Self-determination theory was described as an individual's inherent need to be autonomous both in internal self- relations and self-relations with others (Deci & Ryan, 1985). There were three distinct levels of motivation that drives individuals to meeting their goals in the self-determination theory. They included: intrinsic level of motivation, extrinsic level of motivation, and autonomous level of motivation (Deci & Ryan, 1991). This study focused on the extrinsic level of motivation.

Extrinsic motivation was defined as outside factors that influenced student learning and achievement. There were four types of extrinsic motivation behaviors (Deci

& Ryan, 1985). These extrinsic motivating behaviors included: external regulation, introjected regulation, identified regulation, and integrated regulation (Deci et. al., 1991). External regulation was the focus of extrinsic motivation used for this research. External regulation referred to behaviors that are regulated by rewards and constraints. For the purpose of this study, I focused on the external regulating behavior of the dissertation chairperson perceived by the dissertation student. Through quantitative methods, I explored if once the instructor or chair stopped displaying behavior in forms of rewards and constraints towards the students as their mentor during dissertation, how was student progress affected. I wanted to explore to what extent did student perception of communication and behavior affected dissertation student involvement and engagement in dissertation towards completion or if the student would stop working or abandon the assignment (Vallerand & Bissonnette, 1992). These models were the basis for this study, with the assumption that the extrinsic motivator of the instructor (in this case the dissertation chair) and the student perception of certain dynamics of the relationship in working with the chair impacted student stress and overall satisfaction with dissertation.

The results of this study aligned with this assumption and with the cognitive appraisal theory and the self-determination theory (Deci & Ryan, 1985; Lazarus, 1991). Many of the mentor behaviors (personal connection, mentoring abilities, professional development, and academic assistance) were significant predictors of dissertation students' overall satisfaction with dissertation as well as their appraisal of dissertation stress. Higher scores on several negative communication styles (i.e., questioningness, verbal aggressiveness, and impression manipulativeness) resulted in higher scores of

appraisals of stress such as threat and harm/loss. Whereas lower scores on these same negative communication styles resulted in lower scores of appraisals of stress.

Communication styles such as: preciseness, emotionality, and expressiveness resulted in a more positive experience between dissertation chair and student (Neale-McFall & Ward, 2015). These communication styles lend themselves to building a relationship between the chair and the student in which the chair can prepare the student to enter the profession as a new “expert in the field”. Different interpretations of what is expected from the chair and the manner of communicating those expectations may factor in what is perceived as negative from the student and what the chair is trying to communicate to the student. Dissertation chairs regard dissertation as a process of refinement and independent development whereas the students see dissertation as the last hurdle to jump before graduation (Yang et. al., 2017). Therefore, effective mentoring could result from dissertation chairs using more positive communicating styles which creates an environment where the student becomes more self-guided with less direct supervision. This was because the more positive communication styles allowed the dissertation chair to better explain to the student the type of support that they will give as a chair (Soric et. al., 2013). Students will have more appropriate appraisals of dissertation as a challenge and not as a process that will cause harm/loss or as a threat (Werle, 2010). This more appropriate and accurate appraisal could indirectly increase dissertation student program completion and increase levels of overall dissertation satisfaction (Werle, 2010). As students view dissertation in less negative ways, students gain a greater appreciation from the experience. Therefore, external regulation as a way of extrinsic motivation in the

form of feedback and support from the dissertation chairperson was supported as influential factors of student appraisal of stress and overall dissertation student satisfaction.

Limitations of the Study

There were several limitations to this study. The first limitation was generalizability of the results. Participants for this study were self-selected based upon convenience sampling from online participant pools and various Facebook groups organized by students from online doctoral programs from different universities. Convenience sampling lacked the generalizability of a random sample of participants. A majority of the participants were female (87%) and many of the participants were either Caucasian (white) or African American (black) students with very small representation from the other ethnic groups. This limited the generalizability of the results from other ethnicities of students in online universities. Also, most of the sample self-reported as students within the United States (96%) so international students were not well represented in this study. This limited the generalizability of the results to online students from other countries outside of the United States.

Response bias was also a limitation of this study. The methodology used for this research was survey design, which allowed self-report from participants. Participants were asked to respond truthfully to the questions in the survey. However, there was no way to determine if participants responded honestly or if they responded in a manner to look more favorable which is defined as social desirability bias. To avoid demand characteristics bias where the participant anticipated what the study was investigating,

additional questions were asked that were unrelated to the nature of the study. The survey was also lengthy in that it had 171 questions. A large number of dissertation students (318 out of 496) started the survey and later separated from the study by no longer answering the questions in the survey.

Another limitation of this study was the lack of ability to identify causality. Multiple regression was used to identify predictive relationships between independent variables and one dependent variable. This analytical model determines which independent variables predicted the criterion or dependent variable. Since this was not an experimental design, causation could not be determined. Though the independent variables mentor communication style and mentor behavior did predict variability in dissertation student stress and the overall dissertation satisfaction, neither of those variables were said to be an absolute reason for the increase or decrease in dissertation student stress or overall dissertation satisfaction scores.

Researcher bias was another limitation. Question-order bias, a form of researcher bias, resulted in respondents basing their answers to subsequent questions on how they responded to previous questions. Since the surveys used for this study were pre-developed by other authors, there was no way to reduce the possible occurrence of this bias. However, all surveys used were checked for appropriate validity, reliability, and use in previous research measuring similar variables.

Recommendations

Response rates of survey completion for this research were initially very slow. Initially the survey was made available using the participant pool as well as student led

Facebook groups from Walden University. Due to low response, it was decided to open the invitation to all dissertation students from any online university through Facebook student organized groups. This action led to an increase in the number of students that completed the survey to the 178 participants needed for this study. Potential participants were able to access the Survey Monkey survey link either from the participant pool or on the various Facebook groups' Facebook page. One challenge to student's completing the survey was the length of the survey. The survey contained 171 questions. With multiple assessments combined to measure the identified chair/mentor communication styles and mentor behavior, the length of the survey was a deterring factor for survey completion. For future research measuring these mentor characteristics, a shorter survey may lead to an increased response completion rate.

There was limited generalizability of the research findings due to lack of international respondents, male respondents, as well as equal representation from other ethnic groups. Future research may consider targeting international student populations which were not well-represented in this study to determine if there may be differences in the findings among these additional populations. Further research may compare what the dissertation chair self-reports about their communication style and mentor behavior to that of their mentee's perception of their communication style and mentor behavior to find any patterns or similarities in responses. Also, the collection of qualitative data on dissertation students could be used as follow up or clarification regarding their perceptions of their dissertation chair. Obtaining qualitative data on the experiences of the students could provide insight into the challenges that they face during dissertation

and the university can explore other ways to support dissertation students during their academic journey towards graduation and program completion. Qualitative data could also be collected about the lived experiences of the dissertation students, post-graduation or even if the experience with the dissertation chair led the student to non-completion of the graduate program. Future research could confirm and expand this study by assessing mentor communication style and mentor behavior style directly from the chair

Implications

The findings from this research provided several positive implications for social change at the university, faculty, and student level. This research has provided additional detailed information to the limited body of knowledge on online dissertation students and bring more awareness to the challenges online dissertation students face with dissertation chairs or e-mentors. This research has expanded previous research about how effective mentoring influenced doctoral student attrition and overall satisfaction (Neale-McFall & Ward, 2015; Silinda & Brubacher, 2016). Limited research has looked at individual mentor communication styles and mentor behaviors as key determinants of student stress and/or student satisfaction. Results from this study have identified significant relationships between specific communication styles and dissertation student's overall satisfaction and stress. Results also identified significant relationships between specific mentor behavior and dissertation student's overall satisfaction and stress. This study focused on student perception of mentor communication style and mentor behavior style as predictors of dissertation stress and overall dissertation satisfaction. A study that focuses on reports from the chair could confirm that mentors who are inquisitive,

unconventional, philosophical, and argumentative (i.e. questioningness communication style) result in students perceiving the dissertation process as a threat to their future well-being and have lower levels of overall dissertation satisfaction.

Services provided by the university could offer dissertation students special webinars or classes that are focused on handling dissertation stress. Universities could administer the communication style survey help students identify which communication styles are stressful. Administering this survey as a class assignment could allow for healthy dialogue to take place between what is needed from the dissertation chair in terms of support, personal investment, personal connection, academic assistance, and overall effective mentoring that will help students complete dissertation. Another recommendation would be to revise the survey to ask questions that are more specific to the special dynamics of e-mentoring. Information could be disseminated to dissertation chairs of the communication styles that most students perceive as positive. The mentoring behaviors in the dissertation chair satisfaction survey could be used to orientate dissertation chairs about the expectation that dissertation students have and want in his/her dissertation chair. This would allow dissertation chairs to consider what type of relationship they should develop and foster with his/her student. For example, the dissertation chair could decide that their focus of mentoring behavior could be on academic assistance and professional development.

There are a number of positive social change implications related to the results of this study: attrition, satisfaction, emotional well-being, improving the mentoring experience, and preparing students for the professional field. How communication style is

perceived and the impact on student stress, ultimately affects student attrition and levels of overall student satisfaction. This would improve the overall quality of the dissertation experience for the student as well as leave a lasting impact that will the student will carry into the profession as leaders in the field. Online schools have taken on the position of bringing higher education to the working adult. This means that the online university student population is diverse. The student population includes those who are in the military, single parents, older adults, working parents, and working adults all who cannot attend college classes on a university campus due to the demands of their personal lives. Re-evaluating how dissertation students' progress with their dissertation chairs could make the experience of dissertation less stressful, more satisfying, and may lead to higher completion rates. Returning to school at any age can be overwhelming. Students that complete all coursework only to arrive at the dissertation "chopping block" could be a devastating blow to student confidence and courage that they had when they entered the graduate program. This can have lasting effects on the student's emotional well-being, how they regard the school, as well as re-alter the plans or goals the students made in how the attainment of their graduate degree would give them a better future in the place of job security, better job opportunities and increase in financial income. Action steps taken by the university towards preventing "all but dissertation students" is worth exploring. Creating a more positive social or mentoring experience between the dissertation chair and dissertation student could lead to a more positive change in how dissertation students progress through dissertation as well as increase the percentage of graduate students that complete the graduate program. One such change could be in

scheduled forums via teleconferencing or videoconferencing that could be initiated and carried out to help keep students motivated towards completion without heavily relying on their dissertation chair. This could reinforce the perception of personal connection between the student and the university (Harrison et al., 2014). More opportunities to develop students' post-graduation could be implemented. Job placement services could be offered or made available by the university that will help students transition from being a student to the newly inducted expert in their chosen profession. Transition training and job placement services could be offered nearing the end of dissertation.

At the conclusion of data collection during the course of this study, several students described their sentiments of how they sacrificed time from their families only to get to dissertation and subsequently experienced conflict with their chair. The conflict led to not only relationship damage in which students changed their chairs, but it led to intense feelings (emotional damage) of defeat and neglect within the student. Being more effective and strategic in mentoring these students through dissertation would promote a sense of accomplishment for the student and promote healthier relationships between the chair and student. Mentors are vital to the academic success of mentees. Improving these relationships can strengthen the foundation of these graduate programs of various online universities and the process of teaming up chairs with student protégés that will enter the field and affect positive social change that carries on the life of the profession.

Conclusion

This study was conducted to fill in the gap in the literature by examining the extent to which student perception of their mentor communication styles and mentor

behaviors predicted student stress and satisfaction. As more students are enrolling in online education, it is important to retain the growing number of students that are enrolled in online or distance learning program that will have more students to complete doctoral programs. Online universities must overcome the challenge of student separation that leaves not only the student in amounts of debt in student loans, but is a loss for the university in time, effort, and resources given to the student while involved in doctoral program. Universities are challenged with training mentors and staff to help all doctoral students successfully complete their PhD program. With the average cost of attaining a PhD degree at an estimated cost of \$36,000 or more per year (depending on the number of years to finish, out- of- state expenses, as well as international student cost), students cannot afford not to graduate. Because the relationships between dissertation chairs/mentors and graduate students are a major factor of student appraisal of stress and levels of overall dissertation satisfaction, this relationship must be examined so that students can finish the program they started.

In this study I found that certain mentor dissertation communication styles and mentor behaviors were predictors of student appraisal of stress and the overall satisfaction with the dissertation process. The regression analyses indicated that students perceived specific mentor communication styles and mentor behaviors were related to their appraisal of stress of dissertation and their overall dissertation satisfaction. This study provided insights into the impact of student perception of communication style and mentor behaviors as factors in dissertation stress and overall dissertation satisfaction. This study increased awareness of the challenges unique to online dissertation students

and dissertation chair/mentors. Findings from this study will help future researchers identify interventions and resources that will increase the quality of relationships for online dissertation students and their chair that will give online dissertation students more positive experiences.

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Appendix A: Demographic Information Form

Instructions: Please provide a response for each of the following questions:

1. What is your age? _____
2. What is your gender? Female Male
3. What is your marital status? Single Married Separated Divorced Widowed
4. With which racial or ethnic category do you identify? African American Asian/Pacific Islander Caucasian Latino Other: _____
5. Are you an international student: yes no
6. How many quarters of dissertation have you completed? _____
7. What is your program of study? _____
8. How long have you worked with your current dissertation chairperson? _____
9. To which school do you belong?
 - Graduate School of Education and Psychology
 - Graduate School of Business and Management
 - School of Law
 - School of Public Policy
10. What is your military status? _____
11. How long have you been in dissertation? _____
12. Have you had to change your dissertation chair? __ yes or __no. How many times? _
13. What is your employment status? ___ Not working ___ Part time ___ Full time
14. How many documents have been approved?

Appendix B: Application to Use Walden Participant Pool

In order to post a study on the Walden Participant Pool a researcher needs to have approval from both the Walden IRB and the Institutional Approver. The purpose of this form is for researchers to identify at an early stage of research whether the proposed study is eligible for placement on the Walden Participant Pool website.

Please note the following stipulations and conditions:

- While the Walden University participant pool has been established to assist students in their research, it should only be used if it is appropriate to the study. It should not merely be used because it is convenient but should be appropriate for the research question(s), instrument, and methodology.
- The Institutional Approver may ask for more information, not approve the study and ask for it to be resubmitted with changes, or not approve the study for inclusion in the participant pool based on the appropriateness of the study for the participant pool.
- Approval from the Institutional Approver does **NOT** constitute IRB approval. It is merely letting the researcher know that the proposed research study may be placed on the participant pool website upon receiving all other necessary approvals.
- Upon receiving notification that your study is eligible for placement on the participant pool website, you will need to submit the IRB application and supporting documents to irb@mail.waldenu.edu at the appropriate time. Include a copy of the notification that your study is eligible for placement on the participant pool website with your IRB materials.
- For students in a doctoral level program, this form may be submitted prior to proposal approval. However, any documents submitted will still be subject to review by the University Research Reviewer (URR) and the IRB.
- If changes are made to the study, methodology, and/or instrument(s), the IRB will coordinate with the Institutional Approver to ensure these changes are still acceptable for placement in the participant pool.

For researchers interested in using the Walden Participant Pool, please submit this completed form to participantpool@mail.waldenu.edu .

1. Researcher's Name	
2. Researcher's e-mail address	
3. Project Title	
4. Researcher's program affiliation at Walden (e.g., Ed.D; Ph.D. in Clinical Psychology, etc.)	
5. Research collaborators and roles If researcher is a student, please provide the name of the committee chair or other faculty member supervising this research.	
6. E-mail address(es) of the supervising faculty member and any other co-researcher collaborators	
7. Type of research (place an X in the appropriate section):	
<input type="checkbox"/>	Dissertation
<input type="checkbox"/>	Doctoral Study
<input type="checkbox"/>	Master's Thesis
<input type="checkbox"/>	Pilot Study
<input type="checkbox"/>	Faculty Research
<input type="checkbox"/>	Research for a Course (specify course number, course end date and instructor name):
<input type="checkbox"/>	Other (specify):
8. Please check what type of data collection method you intend to use through the participant pool (check all that apply).	
Please attach the proposed data collection tools to this application for review.	
<input type="checkbox"/>	Survey
<input type="checkbox"/>	Interview (recruit participants only)

	Other (specify):
9. Using lay terms, please provide a brief description of your proposed study	
10. Please list the research question(s) of the study	
11. <u>Quantitative Researchers:</u> Please list each variable of interest (identifying each, if applicable, as independent, dependent, or covariate) and briefly describe how they will be measured. <u>Qualitative Researchers:</u> Please describe the phenomenon of interest and how it will be recorded.	
12. Provide the target number of participants, including numbers per group if the study involves multiple groups. Provide a brief rationale for this sample size:	
13. Describe the criteria for inclusion and exclusion of participants in this study (such as relevant experiences, age, gender, health conditions, etc.). Your inclusion criteria should define all critical characteristics of your sample. Once you've defined inclusion criteria, if you have no further limitations on who can participate, just indicate "none" under exclusion criteria. Inclusion criteria: Exclusion criteria:	
14. Describe how the data collected will be used to answer your research questions (what type of analyses will you do; how do the questions in the instrument/interview relate to your research questions):	
15. Please explain why you are interested in using the participant pool to recruit participants for your study:	

Appendix C: Social Media Post

My name is Julienne King and I am a dissertation student at Walden University and I am inviting to take part in a research study of dissertation mentor communication styles and behavior and stress and satisfaction of dissertation students. I would appreciate your time in completing my survey via this weblink. Thank you.

Qualifying Questions

1. Participants who are in at least their 2nd consecutive quarter of dissertation courses
2. Participants who have had the same dissertation chairperson for at least two quarters.