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Stereotype Threats and Mature Female Students Entering Higher Education: A Qualitative Study Using Experience Sampling Method

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Dissertation Submitted in Partial Fulfillment

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Abstract

Mature female students encounter a range of challenges, including stereotype threat, which may affect their persistence in academic programs. Research has been conducted on stereotype threat in adult learners, but little research has been done on the impact of stereotype threat on mature female students in higher education. The purpose of this qualitative study using the experience sampling method (ESM) was to investigate how role conflict and social isolation due to age differences affected the learning experiences of mature female students (ages 45-54). The study used a conceptual framework incorporating Steele and Aronson's stereotype threat theory and the concept of perceived belonging. The research questions explored participants' use of time and interactions with others to determine the extent to which they may have experienced role conflict and social isolation due to age differences. Using ESM in conjunction with interval-contingent diaries, the study collected data on 5 mature female students enrolled at a national, for-profit undergraduate institution 5 days per week for 4 weeks. Data were analyzed, codes and categories were developed, and themes were identified according to the research questions and diary prompts. Analysis of themes suggested that participants experienced role conflict, struggled with time management, and often felt overwhelmed and exhausted. The themes also indicated that participants interacted favorably with staff and professors but found themselves in conflict with classmates, often as a result of age differences. This study may lead to the development of interventions that can be used to address the unique, diverse needs of mature female students in higher education.

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Dedication

I dedicate this work to my wife, Ann Plenderleith; my children, Joshua, Jonah, and Abigail; my parents, Chuck and Marge Schneider; and my sister, Kristin McBride. Your sacrifices and continuous, loving support throughout this long and demanding process made my eventual success possible. I will be forever grateful.

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Chapter 1: Introduction to the Study

For reasons that include a changing career landscape, children leaving the home, and employees retiring at an older age than previous generations, mature students represent a rapidly growing population in higher education, often at nontraditional, for-profit institutions. Mature students share a number of common characteristics, but they are also an incredibly diverse population (Newberry, 2013; van Rhijn, Lero, Bridge, & Fritz, 2016; Willans & Seary, 2011). One group within the mature student population that continues to receive attention is mature female students (Bosch, 2013; Newberry, 2013). This population presents a range of unique challenges, including stereotype threat (Steele & Aronson, 1995), which may impact their persistence in programs due to indirect impact on their sense of belonging and academic self-efficacy (Bandura, 2012; Erb & Drysdale, 2017; Lovell, 2013).

Mature female students entering or returning to school may face a range of stereotype threats, including use of technology, retention of skills, and performance in traditionally male-centric fields, such as those found in science, technology, engineering, and math (STEM; Gupta, Goktan, & Gunay, 2014; Marchand & Taasoobshirazi, 2013). This dissertation, however, explored two of the most noted in the literature: role conflict (Kahu, Stephens, Zepke, & Leach, 2014; van Rhijn et al., 2016) and age differences (Perry, Golom, & McCarthy, 2015; Lamont, Swift, & Abrams, 2015).

Despite a wealth of research on the mature female student population in higher education over the past 4 decades, comparatively little research, specifically qualitative research, has been conducted on stereotype threat within the mature female student

population. This dissertation filled a research gap in understanding how stereotype threats influence the learning experiences of mature female students entering specifically nontraditional programs (e.g., accelerated, online, blended) in higher education. As the nontraditional student population increases in all sectors of higher education, greater emphasis must be placed on meeting the needs of specific nontraditional groups, such as mature female students, to ensure their academic success.

Chapter 1 provides an overview of the study, including background research, problem statement, purpose, and research questions. It also provides the study's conceptual framework and the nature of the study. Key terms are defined in this chapter, and the assumptions, delimitations, and limitations are also provided. The chapter ends with a discussion of the study's significance.

Background

Steele and Aronson's (1995) seminal article, *Stereotype Threat and the Intellectual Test Performance of African Americans* identified and defined the phenomenon *stereotype threat*, specifically within testing contexts. The authors discovered that stereotype threat impacted students' test and task performance and sense of belonging, which combined impacted the rate at which traditionally stereotyped students left their programs. Steele and Aronson's study established the origin of the theoretical framework guiding this dissertation. The study was instrumental in establishing the definition of stereotype threat, how it operates in educational testing, and its impact on students' cognition and their sense of fit within certain contexts.

Within the larger framework of stereotype threat, there are several related concepts and contexts that helped shape this dissertation. Perceived belonging is often discussed in conjunction with stereotype threat, especially within defined contexts, such as higher education. Ernst, Pfeiffer, and Rothlauf (2013) provided a strong working definition of perceived belonging in their study of social networking sites, specifically focusing on how people join and maintain groups. Perceived belonging is one common impact of stereotype threat and was, therefore, explored in this dissertation. These authors also drew links between belonging and several factors, including stereotype threat. Barber and Mather (2013), in their study of cognition in aging adults, offered a comprehensive look at why, where, when, and how stereotype threat manifests and impacts learning in older adults. As with the previous source, this source was crucial to establishing the framework for the dissertation and providing context for one of the two stereotype threats addressed in the dissertation: age-based threat.

Research conducted by Willans and Seary (2011) provided a deep understanding of mature-aged students, specifically mature-aged female students. In their study of this population, the authors found these students had to negotiate a range of personal, professional, and social obstacles in order to enter and persist in institutions of higher education. This article was crucial to defining the stereotype threats that guided this research. In her qualitative study, Lovell (2013) contributed further insight into mature female students within higher education settings. The author investigated eight mothers at a 2-year college to better understand the relationships between lived experiences of mothers, especially those with older children, and persistence to graduation.

The primary methodology used in this dissertation was the experience sampling method (ESM). Research by Zirkel, Garcia, and Murphy (2015) provided the framework for, and specific insights on, the use of ESM. The authors also provided an overview and tested the validity of ESM. Their thorough explanation of ESM, as well as their honest evaluation of its strengths and weaknesses, allowed for effective application of the method in this study. In their text on intensive longitudinal designs, Laurenceau and Bolger (2013) offered several methodologies, provided explanations of each, and established a set of guidelines for choosing which methodology is best for a particular study. In addition to providing more information on ESM, this text also defined interval-contingent diaries, the data collection method that was used in this study. Finally, Woodcock, Middleton, and Nortcliffe (2012) provided the precedent for using Google Forms to collect data from participants through mobile information and communications technologies, specifically smart phones. In their study, the authors collected questionnaire data from 54 students using Google Forms; they found the application to be agile, accessible, and easy to use for participants.

Problem Statement

Within the broad category of *nontraditional student*, adult learners comprise one of the largest and fastest growing populations (Songuro, 2015; Yoo & Huang, 2013). Adult learners entering higher education may face many obstacles that can lead to increased stress, interrupted academic programs, and reduced graduation rates (O'Neill & Thomson, 2013). Specifically, adult learners may face personal, family, and job obligations that must take precedence over academic obligations (O'Neill & Thomson,

2013). Among adult learners, mature female students—often identified as female students between the ages of 40 and 54 (Bosch, 2013)—experience unique challenges that make them especially vulnerable. For example, the demands of adult children, who may or may not still live in the home, can pull a mature-aged female student away from her studies, drain necessary resources, and/or damage her sense of self (Lovell, 2013).

There has been much research conducted on stereotype threat—the limiting perception that one's actions may reinforce a stereotype about one's group (Steele & Aronson, 1995)—in academic settings, including research on stereotype threats faced by adult learners in higher education. There has, however, been little research discussing how previous academic experiences and current life factors manifest as stereotype threats in mature female students, and the impact these stereotype threats have on this population entering or reentering higher education (e.g., social isolation). The two stereotype threats that represented the focus of this study were (a) role conflict (Lovell, 2013) and (b) social isolation due to age differences (Willans & Seary, 2011).

Purpose

The purpose of this qualitative study using ESM was to investigate how two stereotype threats associated with mature female students (ages 45-54) affect their learning experiences when they enter higher education. Specifically, the study explored how mature female students entering a business management program perceived the following two stereotype threats: role conflict and social isolation due to age differences. It is expected that the results of this study may eventually lead to the development of appropriate interventions that can be used to better serve this growing population.

Research Questions

Central Research Question: To what extent do the two stereotype threats of role conflict and social isolation due to age differences influence the learning experiences of mature (ages 45-54) female, first-year undergraduate students in an accelerated business management program at a for-profit institution of higher education?

Related Research Question 1: How much do mature female students in an accelerated business management program perceive role conflict resulting from their educational commitments?

Related Research Question 2: How much do mature female students in an accelerated business management program perceive social isolation resulting from age differences, and how does that influence their experiences as students?

Conceptual Framework

Stereotype threat served as the theoretical foundation for this study. Steele and Aronson (1995) penned this term after carefully analyzing extensive data on the underperformance of Black students on standardized tests. The researchers posited that knowledge of existing cultural stereotypes about the inferiority of Black intellect increased anxiety in students taking standardized exams as the students tried not to reinforce these stereotypes. Since these initial findings, stereotype threat has grown to describe a wide array of deficits, or gaps, in performance. Often, stereotype threats appear in traditionally disadvantaged groups, including ethnic, socioeconomic, gender, and age minorities. According to Inzlicht and Schmader (2012), a stereotype threat can be

generated, often unintentionally, by an individual and/or by others working with an individual (e.g., a teacher). Stereotype threat is well-documented, but the mechanisms that operate this phenomenon are still being actively explored, especially within groups underrepresented in the literature (Barber & Mather, 2013). This study explored two specific stereotype threats that have been associated with mature female students: (a) role conflict (Lovell, 2013) and (b) social isolation due to age differences (Lamont et al., 2015).

In addition to stereotype threat, this study—its purpose, questions, and methodology—was informed by a framework comprised of perceived belonging and situational factors that influence the perceptions and emotional states of mature female students. Perceived belonging is "the degree to which a person feels connected to and accepted by other individuals" (Ernst et al., 2013, p. 2). Regarding factors that influence mature female students entering higher education, the most prominent are lived experiences (Lovell, 2013), personal and professional obligations (Willans & Seary, 2011), and gender-specific roles (e.g., mother and/or wife; Lovell, 2013).

Nature of Study

This qualitative study used ESM, which afforded access to individual experiences and behaviors in a specified context. According to Zirkel et al. (2015), in ESM "participants [record responses/reactions to] their immediate environment, behaviors, feelings, and/or thoughts several times a day for a period of days or weeks, resulting in dozens or even hundreds of responses per participant" (p.7). Specifically, the study asked participants to complete interval-contingent diaries, which yielded data that was rich and

varied enough to warrant a deep analysis. ESM is characterized by its focus on descriptions of experience in close proximity to the time in which they occurred, which allows the participant to recall details that might otherwise not be accessible in interviews. In this study, interval-contingent diaries asked participants to respond 5 times per week over 4 weeks, or 20 times per participant. Subsequently, a large volume of data was generated. The impact of stereotype threat on belonging and academic performance was explored.

Definitions

Relevant concepts were defined for the purposes of the study, including stereotype threat, perceived belonging, mature female student, higher education, previous academic experience, and current life factors.

Stereotype threat: For the purpose of this study, this concept was defined as the impact knowledge of existing cultural stereotypes about a specific group can have on the academic performance of students from that group, especially when engaged in tasks where their performance is being evaluated (Steele & Aronson, 1995). A stereotype threat can be generated by an individual and/or by others working with an individual. In this study, two specific stereotype threats were explored: threats based on conflict between roles (Markle, 2015), and threats based on age differences (Kulick, Perera, & Cregan, 2015).

Perceived belonging: This term was used to define "the degree to which a person feels connected to and accepted by other individuals" (Ernst et al., 2013, p.2). Perceived belonging is associated with inclusion in groups. Belonging to a group provides practical

benefits for the individual, including support. In this study, perceived belonging was associated with stereotype threat two: social isolation due to generational differences.

Role conflict: As it relates to the Central Research Question and Related Research Question1, this term referred to the perceived conflicts between a mature female student's life roles (e.g., mother, wife, daughter) and her newly adopted role as student (Markle, 2015). Specifically, this term was used to reflect the challenges mature female students face when attempting to balance multiple roles while perceiving that peers and the institution see them as shirking their responsibilities (van Rhijn et al., 2016).

Social isolation: Social isolation occurs when an individual perceives herself as being marginalized or not accepted by a social group, such as peers within an education setting. This term was used in this study primarily in conjunction with age differences and age-based stereotype threat (Kulick et al., 2015), though it is also closely linked to perceived belonging (Ernst et al., 2013).

Mature female student: Also referred to in the literature as mature female learner, this student is an adult female between the ages of 40 and 54 years who is enrolled in an education program (Bosch, 2013). Mature female students often experience distinct challenges in and out of school, such as the demands of children who may or may not still live in the home, spouses, grandchildren, and elderly parents, all of whom can pull a mature-aged female student away from her studies, drain necessary resources, and/or damage her sense of welfare. In this study, the term referred specifically to female students ages 45 – 54 enrolled in an accelerated undergraduate business management program at a large, for-profit institution of higher education.

Higher education: This term is commonly used to refer to all education that occurs beyond the secondary level, usually at a college or university. In this study, higher education referred to a 4-year, baccalaureate program at a for-profit institution.

Previous academic experience: This was defined as any experiences gained in an academic setting prior to starting the program represented in the study. These experiences included primary, secondary, and post-secondary education. While these experiences were not targeted directly in the study, it was expected they would appear in participant responses and, therefore, needed to be addressed in the processing of data.

Current life factors: These are factors that influence the lived experiences of an individual. For the purposes of this study, these factors may have included work, home, and family responsibilities. They also may have included physical, mental, and emotional states. Finally, they may have included social pressures, such as commitments to community organizations, friends, and extended family. As with previous academic experience, these factors were included here as ancillary to the central focus of the study.

Assumptions

The first assumption was that participants would remain enrolled for the entirety of the session in which the study took place, allowing for substantive data to be collected. The second assumption was that participants would follow all study guidelines and respond fully and honestly to diary prompts. The study was designed to make the submission of responses as simple as possible by allowing participants to write and submit entries with limited direction on a range of devices from a desktop computer to a smartphone. The final assumption was that the chosen instrument, ESM, combined with a

survey intended to collect participant information, would produce the rich data it has been purported to produce.

Scope and Delimitations

This study explored the extent to which two stereotype threats, defined in the literature, were present within a study sample of five mature female students (ages 45 – 54) enrolled in a 4-year business management program at a for-profit university. The study used ESM, with responses delivered through an interval-contingent diary to a Qualtrics form for 4 weeks of an 8-week session. The responses were then coded and themes were identified.

ESM characteristically yields large volumes of raw data so more than five participants was not necessary to achieve a representative sample for the purposes of this study. Moreover, the purpose of the study was to explore deeply the experiences of the participants; as such, it was crucial that the number of participants remain low. Although the age range for mature female students as defined in the literature is 40 – 54 years, the age range for this study was narrowed to 45 – 54 in order to make drawing a representative sample more manageable. To further define the sample population, participants were drawn from just two academic programs: Bachelor of Science in Business Management and Bachelor of Science in Business Administration.

A study period of 4 weeks was chosen because the length of a single session at the university acting as the study site was 8 weeks, and 4 weeks yielded enough data to fulfill the purpose of this study. Multiple sessions (i.e., a longitudinal study) were not necessary

to provide significant depth of data. In fact, multiple sessions may have presented unnecessary risks, such as loss of participants and an unmanageable volume of data.

In regard to the literature review, studies older than 5 years—save for a few notable works (e.g., the seminal work of Steele & Aronson)—were not used in order to ensure saturation in the areas of stereotype threat and the experiences of mature female students in higher education. With a few exceptions, studies that addressed the experiences of mature students as a broad population in higher education were not included. When included, these studies were used to establish traits common to mature students, whether male or female, especially traits that reflected belonging, age differences, and lack of family support/role conflict. Similarly, studies that indicated or spoke to possible stereotype threats other than the two used in this study were excluded to avoid unnecessary confusion and reduce the risk of shifting or expanding the study's focus.

As defined further in Chapter 3, three other qualitative designs were considered for this study and ultimately rejected: case study, phenomenology, and narrative inquiry. Case study was rejected primarily because the level of information being collected on each participant was limited to only diary entries; therefore, the data would have lacked the complexity required for a case study. Phenomenology was rejected because a defined, substantive phenomenon did not exist beyond the participants attending higher education. Narrative research was not used because, while the study used diaries to record participant responses, the emphasis was not on the writing itself (a key element of narrative inquiry) but on themes that emerged from the participants' diary entries.

Limitations

The first limitation presented by this study was the chosen method for drawing the participant sample. The study used criterion-based, purposive sampling (Baker & Moore III, 2015) to ensure participants met necessary criteria. The university from which the sample was drawn, however, was large and complex—49 locations across 17 U.S. states and online—with approximately 10,000 undergraduate students. To mitigate bias and make the sample drawing more manageable, an email outlining the study and inviting participants was sent by the university via the university's email list-serve only to students within the Bachelor of Science in Business Administration program. In this process, there was the possibility, no matter how unlikely, that few if any students who responded to the invitation would meet the criteria.

The second and third limitations were related to the study's methodology, specifically how the data would be collected. In the study, data were collected using ESM, where participants recorded their lived experiences at specific intervals via an online interval-contingent diary (Laurenceau & Bolger, 2013; Heavy, 2013) maintained through Qualtrics (Woodcock et al., 2012). Participants were asked to meet the assigned intervals and to honestly and thoroughly respond to the diary prompts. There was no ethical way, however, to ensure that all participants would consistently meet the study guidelines, including being honest, which may have led to uneven data. Also related to the data collection procedure was participants' access to technology. One of the participant selection criteria required participants to have access to the internet through a computer, tablet, and/or smartphone. It was, however, not possible to ensure participants

would have uninterrupted access to the internet or phone service for the entire study period. There could have been times when a participant could not meet an interval requirement due to an internet outage, and this could have further contributed to uneven data.

Significance

As previously noted, mature female students are a population traditionally underrepresented in the literature. When this population is studied, the emphasis is largely on quantitative measurements of specific metrics, such as engagement and persistence. Rarely do these studies provide substantive descriptions of this population, especially in the area of cognitive and emotional needs related to academic achievement. Such descriptions could be used to guide the development of services that target the specific needs of mature students, specifically mature female students. This study, therefore, could support institutions as they work to meet the needs of increasing numbers of mature female students seeking alternative higher education options (e.g., accelerated and degree-completion programs) offered in more flexible delivery formats (e.g., blended and online). In addition to informing decisions about the provision of adequate support services, the study could also assist educators in better meeting the learning needs of the study population.

Summary

Chapter 1 noted that mature students continue to be one of fastest growing populations in higher education, especially at proprietary, for-profit institutions. The background section demonstrated that while this population presents a range of shared

challenges for the institutions who serve them, mature female students present unique challenges that should be addressed with special care and understanding. Moreover, the background section and problem statement emphasized that among the many challenges mature female students face, stereotype threat may impact their sense of belonging and academic self-efficacy, which may, in turn, impact their ability to persist within their programs. Most notably, these sections exposed that while there has been a large volume of research on mature students in higher education, including research on the stereotype threats these students face, there has been comparatively little research on stereotype threat within the mature female student population, and even less research that provided a deep and complex understanding of the stereotype threats experienced by mature female students. The research questions indicated that among the stereotype threats mature female students may face, two of the most noted are role conflict and age differences. Following these opening sections, the chapter offered definitions of key terms, assumptions, delimitations, limitations, and finally the potential significance of the study.

Chapter 2 reviews literature on stereotype threat as the central theory in this study. In order to define the study population, the chapter reviews literature on mature students broadly and mature female students specifically in higher education, especially those enrolled in nontraditional higher education program. Finally, the chapter explores literature on role conflict and age-based stereotype threat and ends with a set of summary conclusions.

Chapter 2: Literature Review

The purpose of this qualitative study was to investigate how two stereotype threats associated with mature female students (ages 45-54), affected the learning experiences of this population entering higher education. This chapter identifies, analyzes, and synthesizes literature related to stereotype threat—a long-established concept in social psychology and education that was coined by Steele and Aronson (1995)—applied to the specific context of mature (ages 45 -54) female students enrolled in an accelerated business management program. Mature female students are traditionally underrepresented in the literature. The stereotype threats faced by this population as they enter higher education are rarely addressed, and the literature in this area has looked almost exclusively at the presence of stereotype threat and its impact on mature female students through quantitative studies. Only a few of these studies have attempted to describe the individual stereotype threats faced by mature female students, and these descriptions have been primarily functional and surface-level. Consequently, I chose to conduct a qualitative study intent on deeply exploring two stereotype threats identified in the literature: role conflict and social isolation due to age differences. In support of this study, I reviewed literature on stereotype threat as a social-psychological construct. To better understand my population, I reviewed literature on mature students broadly and mature female students specifically in higher education, especially those enrolled in nontraditional higher education programs (e.g., blended and accelerated). Finally, I explored literature on the two stereotype threats listed above.

This literature review was primarily compiled through the use of Academic Search Premier, Education: A SAGE Full-Text Collection, ERIC- Education Resource Information Center, PsycARTICLES, Psychology: A SAGE Full-Text Collection, and PsycINFO. I also used the alert tool in Google Scholar to keep me updated on articles that met a specific set of search terms. Finally, in a few cases I used the ProQuest databases. The list of search terms used included *stereotype threat, mature female student, mature female learner, stereotype threat and mature female students, mature female students and higher education, mature female students and lack of family and peer support, and mature female students* and *social isolation due to age difference*.

Stereotype Threat

The concept of stereotype threat was first posited by Steele and Aronson (1995) in their seminal article, *Stereotype Threat and the Intellectual Test Performance Blacks*. In this complex study, the authors tested the impact of stereotype threat on the gap in academic performance between White and Black male college students. The authors performed four experiments over the course of the study. In the first experiment, the authors tested students' aptitude using a single test in two conditions—diagnostic and nondiagnostic. In the second experiment, the authors had the students complete the Spielberger State Anxiety Inventory (STAI) after the test in each condition. Using a 2 x 3 design, the third experiment used the same diagnostic conditions as Experiments 1 and 2, but controlled for race in order to remove the potential interference of stereotype avoidance. Finally, Experiment 4 attempted to measure the impact of identifying race on a pretest questionnaire prior to engaging the diagnostic condition. The combined results

of the four experiments indicated that stereotype threat was most evident when students were in a diagnostic condition. The authors posited several explanations for how stereotype threat reduced/inhibited performance, but they arrived at no clear conclusions about why or how stereotype threat operated in individuals.

Reflecting upon and extending the original studies conducted by Steele and Aronson (1995), Schmader, Hall, and Croft (2015) conducted a review of current research on stereotype threat, specifically within the context of social interaction. The authors also investigated the role stereotype threat plays in reducing performance by drawing mental resources needed to complete tasks. In their review of assumptions underlying stereotype threat, the authors were careful to note the original emphasis on internalized stereotypes within minority populations, specifically Blacks and women. The authors, however, conceded that stereotype threat research has quickly moved beyond internalized stereotypes to external stereotypes reflected in the perceptions of others, such as teachers and coworkers. Moreover, stereotype threat could be dramatically increased in situations where both external and internal stereotypes are present, such as when women believe men are inherently better at mathematics and the teacher predominantly calls upon male students to provide solutions to problems. Also noted in this section of their review is the interesting phenomenon of reduction in stereotype threat in instances where the stereotyped group has completely accepted the discrepancy between their group and another group. In addition to identifying types of threat, the authors also address the impact of threat on cognition. The primary assumption underlying this condition is that members of a group are most impacted by stereotype threat when they

are given a mental task that overtly challenges IQ or ability. Related to this effect is a phenomenon known as stereotype *reactance*, where an individual actually increases performance to avoid re-enforcing a stereotype about his or her group. The final assumption covered in their review of early research was that stereotype threat is highly contextualized, such that anyone who identifies with a specific group is susceptible to the negative effects of stereotype threat. Having said this, the authors were careful to note that groups who have been traditionally marginalized were far more likely to experience stereotype threat.

Moving from traditional assumptions underlying stereotype threat, Schmader et al. (2015) identified specific impacts of stereotype threat. The authors noted that more contemporary research has been dedicated to exploring, and most recently drilling down into, five areas of effect. The first area the authors covered is the effect of stereotype threat on academic performance. While Steele and Aronson's (1995) seminal work looked peripherally at academic performance, more contemporary research has looked at specific areas of impact, most notably impact on performance in science, technology, engineering, and mathematics (STEM). There has, in fact, been a preponderance of research in the area of mathematics, a subject area that has long been recognized for gaps in achievement among specific groups (e.g., women and men). Of particular concern in this area is the discovery that stereotype threat can have a cumulative effect on cognition over time (i.e., primary school to adulthood) leading to a reduced ability to both learn new information and demonstrate what one has learned. The second effect described the relationship between stereotype threat and cognitive impairment. Extending beyond the

academic context, stereotype threat has also been shown to reduce accuracy in cognitive tests where the participant associates a stereotype threat with the type of test being given. A powerful example is tests meant to measure decline in cognitive ability due to age, where participants may score lower based solely on the expectation that their age has led to diminished abilities. The third effect documented the impact of stereotype threat on physical performance, specifically on tasks that rely on automated physical responses and muscle memory. When an athlete perceives a limitation in ability based on race or gender, the athlete tends to confirm the stereotype with reduced performance (e.g., a female athlete, believing women cannot run as fast as a man, may run slower than her actual abilities might allow). Fourth, stereotype threat can negatively impact judgement and decision making. In this effect, a stigmatized individual may be reticent to act in situations where the individual feels evaluated according to a stereotype. For instance, a woman may be hesitant to make a key financial decision if she feels others see women as inherently incapable of making such decisions. The final effect the authors discuss is disidentification. This effect occurs when a stigmatized individual ceases to be invested in his or her performance. Disidentification has been linked to decreased engagement and reduced levels of intrinsic motivation. Disidentification may also contribute to feelings of not belonging, a phenomenon closely related to stereotype threat that is covered later in this chapter.

Building on the now widely used multithreat framework of stereotype threat (Shapiro & Neuberg, 2007), researchers Shapiro, Williams, and Hambarchyan (2013) studied the impact of stereotype threat on the performance of Black college students

taking a university intelligence diagnostic test, as well as the impact on interest and performance of women college students enrolled in science, technology, engineering and math (STEM) courses. The multithreat framework of stereotype threat describes the intersection of group-as-target and self-as-target threats, which can lead to the identification of several co-occurring stereotype threats. To expand on the functionality of the applicability of the framework, the authors chose to focus on the mitigating impact of role models and self-affirmation and developed a hypothesis for each. For role models, the authors hypothesized that role models would reduce stereotype threat for the group but not the individual. For self-affirmation, the hypothesis was that such affirmations would reduce stereotype threat for the individual but not the group. The authors conducted four studies to test their hypotheses. In Study 1, participants were assigned to either a group-as-target or self-as-target group. In the first study, the test group participants were given two unrelated tasks: first, they were asked to read an article and respond to the alumni association; second, they were asked to take an intelligence diagnostic test. The stereotype threat was introduced on the second task. As expected, the results showed the group that received the mentor intervention did not experience threat at the group level but did experience it at the individual level. Study 2 followed the methods of the first study with two differences: the participants were all women, and the participants were asked to complete three unrelated tasks. In the second study, participants were asked to write about a time when they felt personally stereotyped or a time when they felt their performance may reflect stereotypes about their group. Similar to the first study, the introduction of a role-model intervention helped mitigate group

threat. Experiments 3 and 4 were conducted to specifically identify interventions that would affect self-as-target threats. In the experiments, the researchers used self-affirmations to protect against self-as-target threats in both Black students and women students. In both experiments, participants were asked to complete two tasks: first, rank characteristics and vales, and second, take a test measuring intellectual ability. Once again, the authors' hypotheses were substantiated by the results: the self-affirmation intervention helped protect against self-as-target threats. Of particular significance in this study was the clarification of how multiple stereotype threats can lead to different outcomes within a single person. In sum, an individual might perform well in a task where group-as-target has been mitigated but perform poorly within the same context on a task where self-as-threat has been exacerbated.

Over the past 30 years, a number of stereotype threat studies have built on the initial introduction to stereotype threat and its impact on test performance described by Steele and Aronson (1995). In their review of research on stereotype threat, Lewis and Sekaquaptewa (2016) intimated that current conceptions of stereotype threat have moved beyond test taking bias to context specific cues. In this conception of stereotype threat, referred to as *cues theory* in the literature, one or more of three conditions may result in increased cognitive vigilance, a decreased sense of belonging, and diminished motivation. The first condition speaks to situations in which one's group are underrepresented; the second condition involves environments that contain objects that indicate one's group does not belong; and the third condition describes mistreatment of one's group, both overt aggression and subtle but persistent bias. Under the cues theory, a

broad range of elements within a wide range of settings could trigger stereotype threats, which may affect performance, "sense of belonging in and identification with an academic field" (p.41), and ultimately reduced interest in stereotype-rich domains. Given the well-documented negative consequences of stereotype threat, the authors concluded their review with a call for targeted interventions in and beyond the academic domain.

The majority of studies on stereotype threat have emphasized the performance of racial and ethnic minorities on tests, specifically tests of cognitive ability. In large part, this has been in response to the original work of Steele and Aronson (1995), which focused on the impact of stereotype threat on the cognitive performance of Black students. The emphasis on racial minority performance in response to stereotype threat is reflected in Palumbo and Steele-Johnson's (2014) study of differences in Black and White student test performance at a midsized, midwestern college. In the study, the authors assessed the cognitive ability of 246 Black and White students (123 of each race) using the Wonderlic Personnel Test, which tests mathematical, analytical, and verbal ability. The authors then assessed the participants' perceptions of the tests as measurements of knowledge and intelligence using "an adaptation of Steele and Aronson's (1995) manipulation check for stereotype threat inductions" (p. 6). Finally, the authors assessed participants' perceptions of whether or not intelligence and knowledge are fixed using an instrument designed for their study. Demographic information was collected at the end of the study to avoid race becoming a salient factor for participants during the study. After completing a series of, primarily, ANOVA statistical analyses on the data, the authors discovered that while Blacks scored lower on the initial cognitive

test, there were no statistically significant differences between Black and White participants in their perceptions that cognitive tests measure intelligence and intelligence is not fixed. In effect, the authors did not find that stereotype threat, as it is traditionally defined, led to the difference in scores on the cognitive-based test.

Though outside the context of this study, Gupta et al. (2014) exploration of differences between how men and women evaluate and act on entrepreneurial opportunities provided valuable insights into the behavior of women under stereotype threat. Astutely, the authors recognized that "stereotypes can impact individual outcomes by creating a predicament that applies only in situations where stereotypes about one's group are relevant" (p. 274). The authors went on to refine their definition of stereotype threat: "people are hindered in situations where the stereotype suggests that the group to which they belong has weaknesses in a particular domain" (p. 274). The context and domain of the author's study was starting and maintaining small businesses. While this domain was markedly different than the higher education context of this dissertation, the authors' findings are germane to the larger discussion of the impact of stereotype women's choices and behaviors. The authors founded their study on four hypotheses: men will evaluate new opportunities more favorably when any gender-specific information is provided; men will evaluate new opportunities more favorably and women less favorably when masculine stereotypical information is presented; the converse of hypothesis two will be true when feminine stereotypical information is presented; when no gender-specific information is provided, neither gender will report more favorably than the other. The authors tested their hypotheses in two experiments. The first

experiment surveyed 279 students enrolled at a large Turkish university. In response to a context-specific case study that was designed to avoid any gender bias, participants were asked to provide an evaluation of the business opportunity described in the scenario. After analysis, the authors discovered confirmed hypothesis one over the null hypothesis (four). The second experiment replicated experiment one in the US, and the authors found nearly identical results. The authors concluded that pursuing new business opportunities is inherently a masculine stereotyped domain and, therefore, men are predisposed to respond more favorably and women less favorably when evaluating opportunities. However, the authors discovered that when women were specifically encouraged to pursue opportunities using feminine stereotypical information, women were much more favorable in their evaluation of opportunities than men.

In a study more germane to the focus of this dissertation, Christy and Fox (2014) explored the impact of stereotype threat on female student math test performance. Performance on math tests is, perhaps, the most common area of exploration within stereotype threat research, but the authors extended previous research by investigating the impact of stereotype threat on female student performance in a testing environment that has been *gamified*; specifically, the authors focused on the impact of a learning environment virtual leaderboard. The authors posited the presence of a leaderboard would make stereotype threats more immediate. They also posited the leaderboard would play on context and domain cues that, though subtle, would increase stereotype threat. From these underlying assumptions, the authors formed two hypotheses: 1a. women exposed to a male-dominated leader board would perform more poorly on exams than women

exposed to a female dominated board; 1b. women exposed to a male dominated leaderboard would rate lower in math identification than women exposed to a female-dominated board; hypotheses 2a and b were the converse of 1a and b. To test these hypotheses, the authors had 80 women adopt an avatar and enter a virtual environment with a virtual leaderboard. The women were asked to familiarize themselves with the environment, including the leaderboard, and then take a math quiz while in the environment. The quizzes were then scored, and participants were given a survey to assess math and academic identification. The results showed that participants in the women-dominated condition performed worse than those in the male-dominated condition. Despite their poorer performance, however, participants in the women-dominated condition reported much higher academic identification than participants in the male-dominated condition. The authors concluded that in the women-dominated condition, social comparison played a greater role than gender-based stereotype threat. Though the study was highly controlled and limited in its scope, the study helps to clarify the impact of gender-based stereotype threat on academic performance and social interaction within mixed-gender contexts.

Stereotype threat often results in performance gaps—between ethnicities, genders, and ages. In Gupta et al. (2014) study outlined above, the gap existed between men and women in reference to seizing opportunities. In a study conducted by Marchand and Taasoobshirazi (2013), the authors explored the academic performance gap between men and women, specifically within STEM. The study focused on 367 high school students (167 male/145 female) from five high schools enrolled in 11th grade physics. Participants

were randomly assigned to three conditions: implicit stereotype threat, explicit stereotype threat, and nullified condition. Participants were asked to solve four problems, each representing a specific concept in physics. The problems were scored as follows, correct = 1 point and incorrect = 0 points, with partial credit given for simple calculating errors. In each condition, trained researchers provided specific instructions. In the implicit stereotype condition, participants were told only that the problems were based on material already covered. In the explicit stereotype threat condition, the directions were the same as in the first, but participants were also told that the test had yielded significant differences between males and females in the past. In the nullified condition, the core directions were once again the same, but in this case, the participants were told that no difference between genders had been previously noted. The results were analyzed to determine if differences existed based on gender and condition, and a statistically significant gap in performance was discovered in conditions one and two but not in three (nullified condition). While the study's participants were high-school not mature-aged female students, the results of the study confirmed the impact of stereotype threat on academic performance, especially when the source of the stereotype is present and made explicit (in this case, the presence of males in the class and the directive that they tend to do better on the test than females).

The impact of stereotype threat on women has been well-established in the preceding paragraphs, but this dissertation explored not only effects of stereotype threat on women broadly but effects on mature aged women specifically. Age represents a critical stereotype threat domain—so critical, in fact, it now has its own moniker, age-

based stereotype threat. Age-based stereotype threat is explored in considerable detail later in this chapter, but it is important to raise it here in order to further define the concept of stereotype threat domain. In a meta-analysis of 32 studies on age-based stereotype threat, Lamont et al. (2015) explored several areas of impact on performance in older adults. According to the authors, older adults face a range of stereotypes, many of them targeting memory, cognition, and physical competence. Working with 22 published and 10 unpublished studies, the authors established five types of stereotype: memory, skill acquisition, cognitive, physical, and driving. The authors analyzed the studies and identified five themes: experimental manipulations of age-based stereotype threat, stereotyped performance domains, baseline conditions, age and gender, and region of study. After adjusting for bias and several moderating factors (e.g., heterogeneity in methodology and sample size), the authors concluded that age-based stereotype threat has a significant negative effect on cognitive and physical performance in older adults. Of special note for this dissertation is the authors were unable to find significant support for the hypothesis that mature women experienced increased stereotype threat impact due to their inclusion in two traditionally stereotyped groups. The authors did, however, note that women experienced significant threat, as did mature adults. The logical conclusion, therefore, remains that mature women experience greater impact on performance, despite the current lack of conclusive evidence. This conclusion is further substantiated when viewed through the lens of the multithreat framework (Shapiro & Neuberg, 2007).

Another important domain of stereotype threat as applied in Lamont et al. (2015) study was understanding the impact of stereotype threat on academic fit. Specifically

relevant to the mature female student population, who often enter college highly motivated and equipped with considerable life and work experience, is the impact of stereotype threat on students who are high skilled and or possess high levels of intrinsic motivation. According to Thoman, Smith, Brown, Chase, and Lee (2013), even when "gaps in performance are experimentally neutralized or statistically accounted for, stigmatized students who are highly skilled and performing objectively well are…more likely…to avoid or switch out of stereotype-related majors and are less likely to engage in stereotype-related career pursuits" (p. 212). It is this phenomenon—the continued impact of stereotype threat even in populations that are high skilled and high performing—that served as the impetus for the authors' proposed Motivational Experience Model of Stereotype Threat, the purpose of which was to integrate "research on stereotype threat, achievement goals, sense of belonging, and intrinsic motivation to make predictions about how stigmatized students' motivational experiences are maintained or disrupted, particularly over long periods of time" (p. 213). Two components of the authors' model were phenomenological motivational experience, which is comprised of interest and sense of belonging, and self-regulation of motivation, which is comprised of initial and maintenance behaviors. Both components speak to specific effects of stereotype threat on mature female students, but the emphasis on belonging within the phenomenological component is most germane. The model's authors posited that while fit or a sense of belonging is crucial for sustaining motivation and ensuring persistence within a specific context, stereotype threat often disrupts this component.

Barber and Mather's (2013) study of the impact of stereotype threat on memory and social cognition in older adults served as a bridge in this study between stereotype threat and mature female students. For the study, the authors randomly selected a group of 56 older adults, with a mean age of 62 years. The participants were offered a fee for the study along with a performance-based sum. After establishing a baseline using a *sentence-span task*, the authors introduced a manipulation within two conditions: stereotype threat and nonthreat. In the stereotype threat condition, the participants read a fictitious article that supported the common perception that memory declines with age, and they were asked to state their ages aloud. In the nonthreat condition, the participants read a fictitious article describing improvements in memory with age. The participants then re-took the sentence-span task used to establish the baseline. Interestingly, when looking at the impact of stereotype threat on working memory, the authors noted no significant differences in performance between the threat and non-threat conditions. Significant differences, however, were noted when the performance-based compensation, also identified by the authors as regulatory fit, was introduced. When the performance was gain-based, there was a significant reduction in working memory. In sum, when stereotype threat was introduced in conjunction with a performance-based measure, working memory declined. While the study emphasized a monetary reward, it may be that a course grade in conjunction with the stereotype threat that memory declines with age would lead to similar changes in cognitive performance. Also of note in this study were the authors' use of regulatory fit to establish how stereotype threat, specifically the situational fluctuation in promotion and prevention focuses as they related to stereotype

threat, as well as their emphasis on the crucial role executive-control interference plays in stereotype threat.

Perceived Belonging

Ernst et al. (2013) have provided a strong working definition of perceived belonging (also referred to in the literature as sense of belonging or social belonging), a concept often closely associated with stereotype threat, in their study of social networking sites (SNS) and how/why people join and maintain groups. The authors extended the technology acceptance model (TAM) to include perceived belonging as an SNS-specific antecedent in order to test several hypotheses, one of which posited that a positive relationship exists between perceived belonging and perceived usefulness. A measurement comprised of all aspects of the TAM used Likert-type scales to test the study's hypotheses. The findings indicated a positive relationship between "Perceived Belonging directly influences Perceived Enjoyment and Perceived usefulness, and thus indirectly influences overall SNS adoption behavior as well" (p. 7). While the study explored the specific relationship between perceived belonging and the acceptance of SNS, its conclusions indicated perceived belonging may influence acceptance more broadly. While this dissertation did not directly include the use of SNS, Ernst et al. findings clearly indicated the central role perceived belonging plays in mature students adopting new technologies, including learning management systems (LMS), collaboration technologies (e.g., Google Hangout and Skype), and presentation technologies (e.g., VoiceThread and Kaltura).

Two areas where mature female students have experienced a perceived lack of belonging is in the use of technology and inclusion within science, technology, engineering, and math (STEM) programs. Success in or struggles with the use of technology is often described in terms of technology self-efficacy. According to Bandura (2012), self-efficacy is an individual's belief in his or her ability to perform a task or reach a goal. Bandura further contended that self-efficacy was comprised of three components: social, behavioral, and cognitive. It is the social component of self-efficacy that is most relevant to this study, as it speaks directly to the influence of others' perceptions of an individual's ability to perform a task, or the individual's perception of others' beliefs. When these perceptions are driven by or support a stereotype, they become stereotype threat.

Women have traditionally been stereotyped as less technology savvy than men, who also tend to have much more positive attitudes about technology. Seeking to further understand the specific factors that lead to differences in technology self-efficacy between men and women, Huffman, Whetten, and Huffman (2013) conducted a study that explored three hypotheses: a. biological sex is related to technology self-efficacy, in that men report higher levels of self-efficacy than do women; b. the relationship between biological sex and technology self-efficacy are mediated by gender norms; c. The male gender role predicts technology self-efficacy. To test these hypotheses, the study surveyed 750 undergraduate students (majority female) enrolled in an introductory psychology course. The participants were asked their sex and were then asked a series of questions related to gender roles, technology hassles, technology support, and finally

technology self-efficacy. The authors found statistical support for all three hypotheses. Of particular note was the results related to hypothesis 3, which discovered that the male gender role predicted high technology self-efficacy even when controlling for prior use of and knowledge about technology, and the female gender role predicted diminished self-efficacy. The diminished technology self-efficacy in women may lead to a diminished sense of belonging in technology heavy classes with mixed genders.

Much of the research on stereotype threat related to the use of technology by women and minorities has been done in the areas of science, technology, engineering, and mathematics, collectively known as STEM. Often women and minorities leave STEM programs and/or avoid engaging STEM related courses or tasks. In an effort to better understand this phenomenon, Beasley and Fischer (2012) mined the National Longitudinal Survey of Freshman to test the following hypothesis: "the experience of stereotype threat for Blacks, Hispanics, and women is positively related to their attrition from science, math, and engineering majors" (p.431). The authors were especially interested in exploring domains in which stereotype threats were implicit. Using the multiple periods (waves) provided by the NLSF, the authors completed their analysis in three stages. In the first stage, they examined the characteristics of students entering STEM majors against students who were undeclared or who chose non-STEM majors. In the second stage, they looked at the "mean group anxiety experienced by respected race-gender groups to determine whether there are significant differences based on these identities" (p.436). In the final stage, the authors performed logical regression on a range of factors related to students leaving STEM programs. From their analysis, the authors

discovered that women were far less likely to enter college intending to major in a STEM discipline. Looking at women specifically, the authors also discovered they had the highest mean group performance anxiety levels, with women of color having higher levels than white women. The final conclusion drawn by the authors was that performance anxiety had the greatest effect on whether or not a student remained in a STEM major, and the most significant factor in the presence of performance anxiety was domain-specific stereotype threat.

Extending the growing body of research on women in STEM programs and fields, Lewis, Stout, Pollock, Finkelstein, and Ito (2016) explored "what it means to *fit in* and belong in academic contexts, the situational and personal antecedents of belonging, and the consequences of a lack of belonging" (p.1). In their review of relevant research on belonging, the authors discovered a not-so-surprising correlation between sense of belonging and positive attitudes about institutions, professors, peers, and academic work. Extending this correlation, the authors offer studies that link belonging directly to academic outcomes, such that the students with a higher sense of belonging experienced more successful academic outcomes. Moving from a general exploration of belonging to an emphasis on domain-specific belonging, the authors noted the impact of stereotype threat on female students' sense of belonging in STEM programs. Specifically, the authors noted that women left traditionally male-dominated fields in the sciences out of a sense they were outsiders who lacked peer support. Of particular value in this comprehensive review of research on belonging was the authors' identification of four factors that affect an individual's sense of belonging. The first factor was the number and

quality of peer relationships and suitable role models. The second factor was ability stereotypes, specifically the stereotype threat that women were perceived as not as capable as men at being successful in math and the sciences. The third factor was direct interventions, specifically interventions that target stereotype threat and, therefore, perceived belonging. The fourth factor identified in the review was outside influences, especially the influence a system of support (friends, family, and coworkers) have on an individual's sense of belonging within academic contexts. At the end of their review, the authors concluded that while sense of belonging research abounds on specific stigmatized groups, there is little research that examines sense of belonging among individuals who represent two or more stigmatized groups. This dissertation sought to, in part, address this gap in research by exploring stereotype threat and belonging in mature female students.

To better understand factors affecting belonging, along with academic self-efficacy and motivation among mature aged female students, Erb and Drysdale (2017) conducted a survey-based study at a large Canadian university. The study asked participants to complete an online questionnaire that covered five areas: demographics, motivation, learning strategies, and self-efficacy, and sense of belonging. The authors analyzed the survey results using and age and gender as independent variables and the five areas listed previously as dependent variables. The final data set derived from the 99 participants showed that mature female students tended to be less anxious and have higher levels of academic self-efficacy than traditional-aged female students. In the area of sense of belonging, however, mature-aged female students demonstrated a far weaker sense of belonging than traditional-aged female students. Of particular note in this study

was the disconnect between high intrinsic motivation expressed as high self-efficacy and low sense of being a part of the shred learning experience.

While not focused specifically on mature female students, a study of unpreparedness in undergraduate students conducted by Winograd and Rust (2014) drew important connections between belonging, previous academic experiences, stereotype threat, and students' willingness to seek support, a crucial behavior that will be explored later in this chapter in association with lack of family support. In their study, the authors looked at the impact of academic unpreparedness on help-seeking, specifically the extent to which underprepared students utilized resources provided by an educational opportunity program (EOP). The authors grounded their study with two hypotheses. The first posited that self-stigma for help-seeking would be "predicted by: (a) greater academic need; (b) a poorer sense of belonging; and (c) more intense experiences of stereotype threat" (p. 24). The second hypothesized that greater awareness and use of academic support services "would be predicted by: (a) a greater sense of belonging; (b) less intense experiences of stereotype threat; and (c) higher levels of self-stigma for academic help-seeking" (p. 24). The study sample was comprised of 95 first-year students (66 of which were female), most of whom were enrolled in an academic support program on campus (e.g., EOP). Each variable indicated in the hypotheses above (e.g., belonging, stereotype threat) were tested using a separate instrument. Using a multiple regression analysis to control for demographic characteristics, the authors analyzed the results of each instrument. From their analysis, the authors concluded that students who entered the institution less prepared—often indicated by feeling uncomfortable with and

unsupported by the university—were more likely to experience stereotype threat and a reduced sense of belonging.

Mature Female Students in Higher Education

Definition of this population was variable in the literature. There are a number of studies that referred to the population as mature-aged female students and mature female learners. Despite the differences in nomenclature, the research was generally unified around a core set of characteristics. In most cases, these characteristics were common to all mature students entering higher education, regardless of gender; however, there were characteristics unique to mature females, and these characteristics were addressed here, as well.

Exploring the characteristics and needs of mature learners at a two-year college, Newberry (2013) conducted a mixed-methods study of the interaction between faculty and a select sample of aged 50+ baby-boomer students. The author first conducted a survey to gather information and create focused study groups out of the participants. The author then conducted focused study groups centered on a set of defined issues and concerns. After transcribing the notes from the focused study groups, the author analyzed the qualitative data, categorized it, and established themes. From the survey, the author learned that most 50+ students enrolled in higher education purely for the joy of learning or to pursue a new interest. It is worth noting here that students enrolled in 4-year programs may express different reasons for attending. The author also discovered three categories of educational barriers: situational, institutional, and dispositional. Interestingly, several participants used the *other* category in the survey to list computer

technology as a barrier. Most applicable to this study are situational and dispositional barriers. Under situational barriers, participants noted time, financial, and scheduling barriers as most significant. The disposition category was explored in the focus study groups. Using a set of eight questions, each with 1 – 3 subquestions, the author explored participants' beliefs, attitudes and preferences related to such topics as areas of strength and weakness, learning strategies, modes of delivery, and instruction styles and methods. There were four themes that emerged from the focus groups: Learning New Things, Teaching Techniques, Recommended Activities, and Continuing Education (p.87). Under the first theme, participants expressed excitement about taking college courses but preferred to take classes with students like themselves. In the second theme, the participants expressed a preference for traditional lecture-based learning environments. The third and fourth themes showed similar attitudes about returning to school: gain new knowledge, connect with others, and be constructive. Although Newberry's study focused on a community college population that was, on average, older than the proposed age-range for this dissertation, there were many characteristics exposed in her study that are applicable here. Most notably, Newberry's findings demonstrate that older students are concerned about taking classes with students who are younger and more skilled, and they appear to be concerned with using technology to fulfill their education goals.

Concerned with the cost of attrition for both the students and institutions, van Rhijn et al. (2016) sought to further define the characteristics of, systems of support for, and obstacles faced by mature learners. Using the Mature Student Experience Survey (MSES), which is used to "evaluate the ongoing state of mature students' health (broadly

defined to include physical, emotional, and psychological well-being) and to predict academic and other outcomes (e.g., academic success and retention, career trajectories, and other impacts individually and in the family)" (p. 35). While the larger longitudinal study included 2,944 students over 3 years, the study featured here used a subset of 270 students who answered the question:

> We would be very interested in your thoughts on issues with regards to being a mature student that need to be addressed in the future. What would you like researchers, educators, and policy makers to know that affects your success as a student and in your life (p. 35).

Thematic analysis of responses indicated four themes: accessibility, balancing multiple roles, social exclusion, and benefits of being a mature student. Under each theme, the authors were able to identify subthemes. The subthemes identified for accessibility were financial support, access to information, and flexible study options. Under balancing multiple roles, the authors discovered competing priorities and impact on well-being. For social exclusion, participants indicated feeling marginalized on-campus and lack of recognition. And finally, the benefits of being a mature student mentioned by participants were split by gender; the male participants were felt their education defined them, while the female participants felt that pursuing their education allowed them to persevere. Balancing multiple roles and social exclusion are explored in greater depth in the sections that follow this introduction to mature students.

One of the characteristics that distinguish many mature female students from their male peers is their role as mother. Additional research will be provided at the end of this

chapter on the role family plays in mature female students' perceptions of self and the formation of stereotype threat based on this perception. It was important, however, to establish the role of mother in defining the mature student population, as many members of this population have identified being a mother as both motivator and obstacle in their pursuit of a degree (Bosch, 2013). The dual role of mother and student faced by many mature female students was explored by Bosch (2013) in her qualitative study of the individual lived experiences of several mature female students enrolled in an Australian university. Using a narrative approach to understanding participants interpretations of the impact returning to school had on their lives, the author discovered several barriers and areas of impact shared by all participants. The barriers identified by participants were age—concerns over deteriorating memory and lack of stamina—and a lack of support from family, specifically their partners, and from the university itself. Regarding impact on participants, the author discovered that most areas contained by positive and negative attributes. The first area of impact noted by the author was financial. In this area, participants noted a strain on the family budget but also optimism about increased income after graduation. The second area was impact on family and children. Participants noted concerns about having less time for their children, but they also felt they were serving as a positive role model to their children. The third area, impact on relationship with spouse or partner, indicated similar concerns to those expressed about children and family. In addition to the three areas noted here, participants also identified positive impacts on their time management skills, intrinsic motivation, and sense of personal achievement, and future opportunities. Of additional note in Bosch's study was her identification of a lack

of research on *mothers who study*. While this categorization was not the specific emphasis of this study, it did further indicate the need for additional research into the mature female student population.

Looking specifically at the role of age and gender on academic outcomes, Fournier and Ineson (2014) studied the performance of undergraduate students enrolled in a leadership program (LP). The authors established a null and test hypothesis for three dependent variables: gender, age, and previous experience. For gender, the authors hypothesized there is no difference between men and women in LP achievement or GPA; for age, the authors hypothesized older students would be more successful than younger students in LP achievement and GPA; and for previous experience, the authors hypothesized those students with previous experience would be more successful in the two area noted previously than those without experience. The authors tested their hypotheses by reviewing the records of 349 students. In addition to establishing demographics for the participants, the authors coded for those who passed the LP on the first attempt and those who needed multiple attempts. The authors also noted participants cumulative GPA. Results of the analysis showed males were much more likely to complete the LP on the first attempt, and they maintained a .20 higher GPA. The analysis showed no significant difference in LP success or GPA based on age. As expected, the analysis showed a large difference in success rate and GPA between those with experience prior to starting the LP and those without prior experience. This study once again demonstrated a gap in achievement between men and women in a learning environment where men represent the majority.

Research conducted by Willans and Seary (2011) contributed additional insights into mature-aged students, specifically mature-aged female students. Working from a conceptual framework predicated on Transformative Learning Theory, learning communities, and resiliency, the authors interviewed nine participants, both individually and in groups, over 4 sessions. A case study approach was used to frame the interview data for analysis. From the case studies, the authors discovered three themes, or specific areas of challenge, related to resiliency: physical, cognitive, and emotional. Under the theme of physical, the authors noted that mature female students experienced conflicts in life role expectations. Often, these women were "still largely responsible for family care and the majority of domestic, household chores and child-minding responsibilities" (pp. 129-130). Within the theme of cognitive challenges, the authors discovered participants perceived themselves as being slower and less prepared than their younger counterparts. Finally, under emotional challenges, the authors discovered numerous statements expressing anxiety, confusion, and a sense of dislocation. Each of these themes indicated the presence of stereotype threat among participants, both existing threats and threats that may develop as the participants continue with their programs.

In an effort to better understand the motivational factors that lead adult learners to persist in online higher education programs, Yoo and Huang (2013) conducted a quantitative study that explored two questions:

1. What motivational factors are relevant to online adult learners for their online learning engagement? 2. How do online adult learners' gender, age, and prior

> online experiences impact the motivational factors in order to engage with the online learning process" (p. 154)?

The second question is of greatest interest to this dissertation. To explore these questions, the authors surveyed 190 students enrolled in 1 of 12 online Master's degree programs. The survey instrument, designed to reflect both Self-Determination Theory and Engagement Theory, asked participants to respond to 19 items on motivational factors and five items intended to provide demographic information. The results of the survey yielded three demographic factors that influenced motivation and engagement: gender, age, and previous experience with online technologies. The authors discovered that women, specifically older women, were more likely than men to seek out learning environments that allowed them to better balance life, work, and education. In the context of their study, this environment was online. What was interesting in the conclusions of this study was that while older women sought online environments for their convenience, they expressed less initial confidence in engaging the online environment and its requisite technologies. This lower confidence appeared to be more a factor of age than gender, and the respondents reticence also aligned with other research on female attitudes toward technology, specifically in reference to technology self-efficacy.

As Yoo and Huang (2013) and others have noted, there is an intrinsic relationship between motivation, engagement, and stereotype threat. This relationship was more intimately explored in relation to mature female students within Lovell's (2013) qualitative study, which investigated eight mothers at a two-year college to better understand the relationships between lived experiences of mothers, especially those with

older children, and persistence to graduation. In her study, Lovell used hermeneutic phenomenological perspectives to identify themes and horizontalization in data analysis to ferret out key statements and identify clusters of meaning. Analysis yielded three themes: the participant's rationale to pursue a degree, the participant's emotional investment, and the greatest motivators influencing participant's desire to earn a degree. Under the first theme, rationale to pursue a degree, Lovell discovered mothers with younger children tended to cite their children as their primary rationale, whereas mothers with older children tended to cite personal fulfillment as their primary rationale. For the second theme, emotional investment, mothers with younger children described a sense of ambivalence (wanting to attend for their children but feeling angst at the thought of leaving them), while mothers with older children tended to describe personal angst brought on by competing demands on their time (i.e., schedule and life conflicts). Finally, under the third theme, motivators for earning a degree, mothers with younger children unsurprisingly identified their children as their primary motivation, where mothers with older children cited negative childhood experiences as their primary motivation. Despite the article's limited explanation of methodology and the study's choice to separate participants into two broad groups based solely on the age of their children, the focus on lived experiences, specifically the lived experiences of older mothers was particularly relevant to framing the impact of family on mature female students' perceptions and motivations, both of which spoke to potential stereotype threat.

Two Stereotype Threats Identified in Mature Female College Students

This study explored two stereotype threats identified in the literature on mature female students entering higher education. The two threats were lack of family support/role conflict and social isolation due to differences in age. While each of these threats was briefly described in the previous sections, this section explored them in greater depth through current literature.

Lack of Family Support/Role Conflict

Already established in this review of research, mature female students encounter a range of obstacles that impact their experiences in higher education. One of the most persistent factors mature female students face is the lack of family support and/or the role conflict between mother and student. Often, mature female students must negotiate demands of school and family to create a space where they can be successful in their academic pursuits. This negotiation of multiple roles and the fear that becoming a student may compromise other roles, such as being a mother, has been widely documented in a range of studies. This fear is often referred to as role conflict in the literature. Less present in the research has been the investigation of role conflict as a source of stereotype threat. The persistence of this factor in the experience of mature female students, however, has indicated a need to investigate it as a source of stereotype threat.

In an extensive mixed methods study intent on defining the factors that impact academic persistence in nontraditional college students, Markle (2015) explored the interplay of role, demographic, academic, and context factors within the context of academic persistence. The study used an imbedded mixed methods design, where a single

survey collected qualitative and quantitative data. In the end, 492 students at a public university completed the survey. Among the independent variables measured in the study was role conflict. Within this variable, the study specifically explored family and work conflicts. Analysis of the data showed that while there was no significant difference between men and women in relation to persistence, nearly one third of the participants experienced role conflict, and of this one third, nearly one half experienced high to very high levels of role conflict. There were also significant differences between the types of role conflict, where work-school conflict was rated highest followed closely by family—school conflict. Of particular note in the results of the study were the different reasons given for early withdrawal based on gender: men most often cited financial reasons and women most often cited interrole conflict, specifically conflicts between family and school. Markle's study added important understanding to the impact perceived family commitments and perceived roles within the family can have on the academic success of older women.

In a deep study of mature student experiences in higher education, van Rhijn et al. (2016) confirmed the findings of Markle (2015). The authors were able to isolate several challenges faced by this growing population. Specifically, the authors discovered mature students face "challenges with balancing their multiple roles and responsibilities and experience social exclusion as nontraditional students, feeling that they are not understood by their peers or institutions" (p. 29). The authors drew a sample of 270 students from a larger pool of nearly 3,000 who had participated in an earlier longitudinal study. The study used a simple design and was predicated upon a single question that

asked, in part, the following: “What would you like researchers, educators, and policy makers to know that affects your success as a student and in your life” (p. 35)? Using thematic analysis, the authors were able to identify a number of themes that included accessibility, social exclusion, and most germane to this dissertation, confusion of roles. Under confusion of roles, participants were particularly concerned with being able to balance competing priorities. One participant provided the following response: “I don’t contribute as much as I should to the household, I’m not as productive at work as I should be, and I’m not maintaining the academic standard that I expect of myself.” (p. 38)? Other participants felt they would be judged as less effective or less capable, which represents the intersection between stereotype threat and the barriers identified in the study. The authors particularly noted participants’ concern that others—children, spouse/partner, members of the academic community—would view them as shirking responsibilities, as being “flaky”, which reinforced the presence of a persistent stereotype threat within the study population.

Role conflict within the lives of mature students can also contribute to a phenomenon known as role overload (van Rhijn et al., 2015), where an individual feels pulled in too many directions and begins to reduce commitment to one role in favor of increased commitment to another role. This phenomenon, according to van Rhijn et al. (2015) in a mixed methods study conducted at the bequest of the government of Ontario, Canada, often leads mature students to enroll part-time in order to mitigate the demands on their time. The authors further explained that mature students who enrolled part-time tended to experience greater periods of absence and doubts about whether returning to

school was the right move for them. In their study, the authors worked with approximately 1200 students who had exited their higher education programs. In the quantitative aspect of the study, the authors conducted regression analysis on the results of surveys that explored five areas: depression, school satisfaction, perceived stress, tension, and reasons for not being enrolled. The analysis of data provided statistical significance for three factors, of which tension managing multiple roles was one. The qualitative aspect of the study yielded two primary themes, voluntary withdrawal and involuntary withdrawal. The subtheme common to both primary themes was role conflict, whether the role be worker, mother, or caretaker. Again, in reflecting on their role conflicts, participants consistently indicated fear or concern about not being enough or not doing enough to meet perceived expectations. Implicit in their responses was the concern that they would be seen as not being a good worker, mother, or in the case of care giving, son/daughter.

Focusing more directly on the demands pursuing a degree places on the mature student and his or her family, Kahu et al. (2014) interviewed four male and 15 female students, 11 partners, and any children over the age of 5 years. The participants were first interviewed four weeks prior to the start of the students' first term. The students then submitted weekly diary entries over the course of their first semester. At the end of the semester, follow-up interviews were conducted with all participants. The interviews were transcribed and a thematic analysis was performed on the transcripts and diary entries. From the analysis, the authors determined that space and time negotiation was a skill learned through trial and error. They also discovered that the home environment was not

necessarily a safe study space. Finally, the authors discovered that family support was crucial to the students' success (or lack of success). In regard to family support, students who were successful had partners and/or children who were flexible and willing to communicate their needs. Students with family who struggled to provide this level of support were forced to fit their education into an entrenched family structure and were, as a result, less successful overall in their academic pursuits.

In addition to role conflict and/or role overload, some mature female students have expressed concerns over their changing identities resulting from obtaining their degrees and how these changes might strain family relationships and family perceptions of their role within the family. Explicitly, mature female students often fear they are failing to meet their responsibilities at home. They may also feel selfish for returning to school, and they often express concerns that others may see them as selfish, as well, including family members (Markle, 2015; van Rhijn et al., & Fritz, 2016). Interested in the interplay between changes in mature female student identities after entering higher education and changes in family dynamics, Webber (2017) used narrative inquiry to study 11 women enrolled at a higher education institution and select members of their families to discover how the presence or lack of family support impact the success of mature female students. The author conducted a series of focused interviews, first with the participants and then with members of their families. Thematic analysis of the data gathered from the interviews yielded three overriding themes: identity before entering higher education, transformations, and impact on family relationships. Further analysis of these three areas led the author to develop a theory of family capital as the key factor

influencing mature female success. Under the umbrella of family capital, the author included four specific types of capital provided by the family: economic, cultural, social, and emotional. Webber found that mature female students who experienced a lack of one or more areas of family capital, or perceived the family as withholding this capital due to their change in identity, felt less supported at home and were less successful overall in their programs. The greatest impact on mature female students' success in their programs resulted from feeling as though they could not dedicate the time needed to be successful in their programs.

Social Isolation Due to Generational and Age Differences

Although age, specifically the concept of maturity, were addressed in other sections of this chapter, this section was intended to drill down into age-based stereotype threat. In much of the literature in this area, perceived stereotype threat and stereotype threat were used interchangeably. Finally, this section did not attempt to focus only on age as it related to women, as this would have limited the research and understanding the impact of age-based stereotype threat on individuals, male or female.

According to, Perry et al. (2015), there is limited empirical evidence to support stereotypes based on generation. In their review of current literature on generational differences, the authors contend there is limited quality, conclusive research on generational differences, let alone generational stereotypes. Having said this, the authors conceded there was enough evidence to indicate bias and distinct impressions/perceptions based on generation. The authors suggested that much of the time a stereotype thought to reflect generation was actually grounded in age. For example, the authors noted that

people who described themselves as older, as opposed to a baby boomer, were far more likely to experience stereotype threat in the workplace. Burgess (2017) confirmed Perry et al. conclusions in her extensive study of generational stereotyping and stereotype threat. Burgess sought to determine whether the predictive variable generational stereotyping correlated with the outcome variables stereotype threat, increase in workplace communication conflict, and reduced engagement. The author surveyed 111 workers comprising three generations: Baby Boomers, Generation X, and Generation Y. Analyzing the 99 survey responses received, the author concluded that generational stereotyping was not a significant predictor of stereotype threat, though it was a significant predictor of increased conflict and reduced engagement. Burgess's study further supported that generational differences are not reliable sources of stereotype threat.

The research on age-based stereotype threat in the workplace and in education is vast and diverse. While the inclusion of workplace research may, at first glance, appear ancillary to the focus of this dissertation, mature students often approach their return to education as an extension of their work, or as a second career after a lay-off or early retirement (Newberry, 2013). Moreover, stereotype threat experienced in the workplace may carry over into the classroom, such as the perception that older workers are out of touch and must be regularly retrained. In summary, what mature workers experience often aligns with what mature students experience, despite the differences in context.

One measurement impacted by stereotype that appears to cross the line between worker and student is engagement. Kulick et al. (2015) conducted a 3-year study of 666

Australian workers. While there has long been an assumed correlation between stereotype threat and reduced engagement, the authors looked to concretize this assumption through the testing of five hypotheses. The first hypothesis stated there will be a clear association between stereotype threat and context clues when mature workers were supervised by a younger worker, in workgroups with younger workers, or were in manual labor positions. The second hypothesis stated mature workers under the conditions outlined in the first hypotheses would experience lower engagement. The third hypothesis stated that companies offering high performance (HP) work systems would see the lowest levels of stereotype threat experienced by mature workers. The fourth hypothesis stated companies offering HP systems would see higher levels of engagement from mature employees. Finally, hypothesis five posited that companies offering HP systems would see the lowest manager age on mature worker engagement. To test their hypotheses, the authors surveyed participants in three waves, each one year later than the previous wave. The authors concluded that stereotype threat significantly impacted engagement in mature workers who experienced the three conditions (or cues) outlined in hypothesis one. They also discovered that workplace practices, such as HP systems, only partially mitigated stereotype threat. The results of this study indicate challenges for mature students in college programs that require them to engage directly with younger students, such as in work groups.

In addition to facing challenges working with younger peers, older adults may also experience reduced cognitive performance and outcomes as a result of age-based stereotype threat. In an extensive meta-analysis of more than 30 articles, Lamont et al.

(2015) found that age-based stereotype threat can drastically impact the performance of older adults taking tests designed to measure cognitive ability. To establish the framework and context for their analysis, the authors chose to categorize study manipulations into two categories: fact-based and stereotype-based. Fact-based manipulations tend to relate findings from previous studies to participants, whereas stereotype-based manipulations rely on explicit and implicit references to age and performance. Regarding stereotype-based manipulations, the authors contended these manipulations were purer in form because they stemmed from societal stereotypes and, therefore, allowed for more successful exploration of the impact stereotyping has on older adults. Working more concretely within stereotype-based manipulations, the authors identified specific stereotyped performance domains. The authors established that different performance domains led to different levels of stereotype threat in older adults. For instance, in domains where stereotype threat influences controlled processing, older adults may experience "heightened physiological response, increased task monitoring, and attempts to suppress negative emotion, [all of which could] cause cognitive depletion, reducing working memory capacity and the ability to perform tasks requiring controlled processing" (p. 182). Once they had established a clear context for their analysis, the authors reviewed and coded 22 published and 10 unpublished articles, adjusting for baseline, gender, and region. The analysis revealed significant impact of age-based stereotype threat on the physical and cognitive performance of older adults. More importantly, the authors concluded that the level of impact was, within a very narrow range, homogeneous across all studies in the analysis. Finally, and perhaps most

notable for this study, the authors found no evidence that women experienced greater impact from age-based stereotype threat than did men.

In an attempt to understand the impact of stereotype threat on cognitive functioning between different age groups engaged in the same task Meneghetti, Muffato, Suitner, De Beni, and Borella (2015) conducted a quantitative analysis of spatial recognition ability in 102 participants ranging in age from 17–84. The authors broke the participants into three groups based on age range. Using two fictional maps, the authors had the participants complete two tasks, a test, and a perceived stereotype threat scale. The participants, who were tested individually, were made familiar with the maps, associated vocabulary, and computer prior to engaging the tasks and tests. The tasks and tests were scored differently, such that the tests were scored one point for each correct answer, and the tasks were scored using circular statistics procedure. The results were then submitted to a series of statistical analyses. The results of the analyses showed correlation between spatial recognition, age, and perceived stereotype threat. Moderate correlation was shown between age and declining performance on the tests and tasks. Strong correlation was shown between perceived stereotype threat, age, and performance; effectively, the older the participant, the greater the perceived stereotype threat. In their discussion, the authors were careful to note that the level of impact of stereotype threat depended on the specific type of spatial task being performed. The implications of this study are that stereotype threat is not simply, or primarily, a function of age in older students but also task specific. This would indicate that older students, especially older female students (who characteristically experience higher levels of stereotype threat than

their male counterparts), may struggle with specific tasks in comparison to younger students.

In conjunction with the impacts on broader mental and physical performance (Lamont et al., 2015), stereotype threat has been shown to negatively impact episodic and working memory, both of which are crucial to success in higher education. In their meta-analysis, Armstrong, Gallant, Li, Patel, and Wong (2017) analyzed 38 articles that explored the impact of stereotype threat on the episodic and working memory of older adults with a mean age of 60 years. While the population emphasized in the analysis is older than the population of this study, the implications for memory impairment are relevant. The authors submitted 23 articles focused on episodic memory to a random effects meta-analysis, and they discovered stereotype threat induction significantly impacted memory. While the authors did not identify a significant difference in impact between types of memory tasks, they did discover a significant difference in the impact of stereotype threat on immediate and delayed memory tasks, where the impact was greater on immediate than on delayed memory. The authors then conducted a meta-analysis on articles focused on working memory and discovered that stereotype threat negatively impacted working memory only when subtly manipulations were used in a study; in cases where blatant manipulations were used, there was no significant impact. The authors concluded that overt stereotypes had a greater impact on episodic memory, and that the greatest impact of stereotype threat on both types of memory occurred when older adults engaged controlled, self-initiated memory-based tasks, such as might be found on recall-based exams.

Summary and Conclusions

The concept of stereotype threat first posited by Steele and Aronson (1995) has evolved into a broad, complex, and interconnected area of research. Within this area of research, domain-specific stereotype threat and the relationship between stereotype threat and belonging have been among the most profound and impactful directions for understanding how stereotype threat arises in individuals and how it affects individual behaviors. One of the most commonly studied domains in relation to stereotype threat is higher education, the domain incidentally used by Steele and Aronson (1995). Within the domain of higher education, the majority of the research has focused on ethnic and gender minorities, with the most emphasis being given to Blacks and women. Moreover, most studies have focused on testing with specific emphasis on performance and cognition.

Within approximately the last 10 years, more and more research in this area has been dedicated to age, specifically middle age and the elderly. These studies have tended to focus on cognition, memory, and belonging. Research into the combination of middle age and gender has been growing, though there are currently still relatively few studies exploring this combination of factors. Even fewer studies focus on stereotype threat in middle-aged (often referred to in the literature as mature) women in higher education. This is somewhat surprising given the growing number of mature-aged students entering higher education today. The research that has been done on the mature female population has largely focused on the workplace and broader learning contexts. Those studies that have focused on this population in the higher education domain have disproportionately

emphasized STEM programs of study and technology self-efficacy. Given the gaps in relation to the mature female population, this dissertation sought to add considerably to the literature not only on mature female students in higher education but to qualitative investigations into research on stereotype threat as a whole.

Chapter 3 includes a description of the research design used to explore the stereotype threats experienced by mature-aged female students entering higher education, as well as the rationale for that design. The chapter also describes the role of the researcher, methodology (participant selection, instrumentation, data collection, and data analysis), and issues of trustworthiness. The chapter concludes with a summary of key ideas.

Chapter 3: Research Method

The purpose of this qualitative study using ESM was to investigate how two stereotype threats affected mature-aged female students entering higher education. Specifically, this study explored how mature-aged female students perceived role conflict and social isolation due to age differences. It was anticipated that the results of this study would eventually lead to the development of appropriate interventions that could be used to better serve this growing population.

This chapter includes a description of the research design used to explore the stereotype threats experienced by mature-aged female students entering higher education, as well as the rationale for that design. This chapter also includes the role of the researcher, methodology (participant selection, instrumentation, data collection, and data analysis), and issues of trustworthiness. The chapter concludes with a summary of key ideas.

Research Design and Rationale

This qualitative study used ESM. A quantitative approach was not chosen because the purpose of the study was to explore the lived experiences, perceptions and feelings of mature female students within specific a specific context over a defined period of time. Moreover, the study was concerned with understanding how the population's experiences, perceptions and feelings might reflect two specific stereotype threats through the gathering and analysis of complex, subjective data. The data generated by ESM entries provided a deeper understanding of mature female students enrolled within a baccalaureate program in business administration, delivered in a blended (onsite and

online), 8-week, accelerated format. ESM, which emerged from the phenomenological tradition, was chosen because it focuses on participants' subjective recording of their experiences at the moment and in the context in which they are happening (Zirkel et al., 2015). Typically, participants in a study using ESM are asked to complete guided entries and/or respond to brief open-ended questions "about their immediate environment, behaviors, feelings, and/or thoughts several times a day for a period of days or weeks, resulting in dozens or even hundreds of responses per participant" (Zirkel et al., 2015, p. 7). This study asked participants to report once per day, 5 days a week. Because ESM requires study participants to consistently self-report feelings, perceptions, and experiences one or more times per week, it was necessary to provide participants with a data-rich, valid, but accessible recording instrument. The instrument for this study is described in the Instruments section below.

Three other qualitative designs were considered for this study and ultimately rejected: case study, phenomenology, and narrative inquiry. A case study was seriously considered but ultimately rejected because the emphasis of this study was on participant responses alone, and case study requires a much more complex set of data on each participant, if treated as a separate case, or on a group as a whole. Phenomenology was initially attractive as it explores phenomena through the lens of a defined theory, which, in this case was stereotype threat. In the end, however, phenomenology was rejected because a defined phenomenon did not exist beyond the participants simply attending higher education, and the purpose of the study was, in large part, to explore participants' opinions, beliefs, and interpretations on two specific stereotype threats. Narrative

research was attractive because it allowed for deep investigation of participants through their own written reflections. However, while the study used diaries to record participants' responses, the emphasis was not on the writing (a key element of narrative inquiry), nor did it attempt to establish a specific timeline of rememberances that would be used to identify points of common and uncommon experiences. Rather, the study focused on participants' experiences with specific stereotype threats within a defined context and period of time.

Research Questions

There has been much research conducted on stereotype threat—the limiting perception that one's actions may reinforce a stereotype about one's group (Inzlicht & Schmader, 2012)—in academic settings, including research on stereotype threats faced by adult learners in higher education. There is, however, little research discussing how current life factors manifest as stereotype threats, and the impact these stereotype threats have on mature-aged female students entering higher education (e.g., reduced sense of belonging). The two stereotype threats that represented the focus of this study were: (a) lack of family and peer support (Lovell, 2013), and (b) social isolation due to age differences (Willans & Seary, 2011).

Central Research Question

To what extent do the two stereotype threats of role conflict and social isolation due to age differences influence the learning experiences of mature (ages 45-54) female, first-year undergraduate students in an accelerated business management program delivered at a for-profit institution of higher education?

Related Research Questions

1. How much do mature female students in an accelerated business management program perceive role conflict resulting from their educational commitments?
2. How much do mature female students in an accelerated business management program perceive social isolation resulting from age differences, and how does that influence their experiences as students?

Role of Researcher

Because this study used ESM, the participants recorded their perceptions/experiences and uploaded them to Qualtrics via a preset form containing the diary prompts. Qualtrics was connected to an account designated specifically for this research study. As researcher, I gathered and analyzed data submitted to the Qualtrics account. While I was not directly involved in data recording, it is important to disclose I am a professor within the university system where the study took place. To avoid potential conflicts that might arise as a result of my connection to the study site, all participants were drawn from locations other than where I currently teach. This greatly diminished, though not entirely eliminated, the possibility of a participant having attended a location where I teach or from any campus where I have previously taught. Moreover, it was likely I would not have met any of the participants involved in the study prior to the start of the study, and because data was collected remotely, I did not meet any of the participants directly during the study.

Methodology

Participant Selection

Following IRB approval, criterion-based purposive sampling (Baker & Moore III, 2015) was used to draw the participants for this study. Participants were selected based on the following criteria:

- Participant must be female.
- Participant must be between 45 and 54 years of age.
- Participant must be a parent, spouse/partner, and/or caretaker.
- Participant must be in either her first or second 8-week session of enrollment at the university.
- Participant must be enrolled in BS in Business Management (BSBM) or BS in Business Administration (BSBA), both 4-year programs.
- Participant must be enrolled in at least one course for the session in which the study took place.
- Participant must not be enrolled in a course being taught by the researcher.
- Participant must have access to the Internet through a computer, tablet, and/or smart phone.

Qualitative studies using ESM have characteristically drawn a small sample size, even as small as a single participant (Martinez-Sierra, Arellano-Garcia, Hernandez-Moreno, & Nava-Guzman, 2018). The sample in this study was designed to provide a rich but manageable set of data by drawing five participants. This number of participants would yield 100 data points. More specifically, the number of participants was kept to a

maximum of six for two primary reasons: a. qualitative use of ESM generates large amounts of dense data that can be difficult to manage, even with very small sample sizes (Zirkel et al., 2015); b. relatedly, the large amount of data generated over time by each participant makes it unnecessary to draw a large number of individuals to achieve a representative sample (Zirkel et al., 2015).

Instrumentation

Because ESM requires study participants to consistently self-report feelings, perceptions, and experiences at designated intervals, it was necessary to provide participants with a robust, valid, but accessible recording instrument that was, ideally, accessible using mobile devices (e.g., smart phones and tablets). Garcia, Welford, and Smith (2016) have noted that while the use of mobile apps are common in quantitative (most often marketing) research, they are rarely used for qualitative research. The authors did, however, note increasing use of mobile apps to gather diary entries, photographs, and other forms of qualitative data because of the numerous benefits these apps provide, including ease of access for the participant, access to the app over time (e.g., use in longitudinal studies), and instant, reliable transfer of data.

The best instrumentation fit for this study that met the criteria outlined above was an interval-contingent diary (Laurenceau & Bolger, 2013; Heavy, 2013), which allowed participants to record their experiences through guided or open entries at set times or intervals. In this study, participants recorded their experiences at the end of each day, Monday – Friday, for weeks 5 – 8 of an 8-week session at the University serving as the study site. Because of the intensity of data collection inherent in ESM and interval-

contingent diaries, Zirkel et al. (2015) and Laurenceau and Bolger (2013) strongly recommended utilizing a collection period of no more than 4 weeks. Even with this relatively brief longitudinal period, the study would yield as much as 100 data points. Moreover, research using interval-contingent diaries suggests that participants who are well-informed of the process and are supported throughout the study period generally record their entries as requested and on a consistent basis (Laurenceau & Bolger, 2013). In choosing five participants, enough data points were generated to allow for meaningful analysis even in the event of inconsistent or incomplete reporting by one or more participants.

The diary entries were guided using two prompts that remained the same for each day of the study period. Directions for completing the diary entries were included in the participant packet and, in brief, at the top of each day's diary entry email. In addition to the directions, the participants were given access to the researcher's university email address. Through this email address, participants were able to ask questions about completing and submitting diary entries. The email address was essential considering the struggles that participants characteristically experience with ESM broadly and interval-contingent diaries specifically (Heavy, 2013; Laurenceau & Bolger, 2013; Zirkel et al., 2015).

The two prompts that were used to guide the daily diary entries mirrored the two research questions. Similar to a quality interview question, the prompts were designed to stimulate reflection without unduly guiding the specific content of those reflections.

Table 1

Related Research Questions and Prompts

Related research questions	Prompts
1. How much does role conflict influence the experiences of mature female students in an accelerated business management program?	1. Describe how you spent your time today in and out of school. In your description, please include how well you felt you managed your time and met your obligations. Additionally, consider how your role as student may have come into conflict with other roles you play.
2. How much do mature female students in an accelerated business management program perceive social isolation resulting from age differences, and how does that influence their experiences as students?	2. Describe your interactions with your professors, classmates, and school staff today, whether face-to-face or online. In your description, please include the types of interactions, the reasons for the interactions, and how the interactions made you feel.

In addition to the two prompts, participants were invited to share feelings about and reactions to their day in a more open-diary format. It was hoped that allowing this option after the two prompts would encourage participants to explore related experiences more deeply and more genuinely.

Recruitment

The study site's student email listserv was used to recruit participants. An invitation was sent to all undergraduate students enrolled in the Bachelor of Science in

Business Management and Bachelor of Science in Business Administration programs. The invitation included the specific criteria listed under Participant Selection above, explained why their participation was important to the study, and asked for volunteers who met these criteria and were interested in participating to respond via email. Of those who volunteered, I selected the first six for the study (or fewer if less than six remained). If more than six met the criteria, four alternates were chosen in case a participant chose to leave the study or withdrew from the session in which the study took place. Choosing the first six, in itself, served as a selection from the purposive sample. All volunteers were notified of their status within one week. Those who were chosen to participate in the study received a participant packet. Those who were not chosen received an email thanking them for their willingness to participate in the study and explaining the selection process and why they were not chosen.

Participation

Those who volunteered to participate in the study were sent a consent form, which included the Walden IRB approval number, **12-20-18-0342556** and expiration date, **December 19th, 2019**. Participants were required to read and sign the form per Walden University's guidelines. The consent form included the study's purpose, procedures, and research questions; it outlined risks and benefits for participants; and, it provided an introduction to the researcher, how the researcher would ensure participant privacy, and the researcher's contact information. The form also clearly stated that participation was voluntary and would not involve compensation. Finally, in order to protect the rights of participants at all times, the researcher followed the American

Psychological Association's (2002) Code of Ethics. Individuals who agreed to participate in the study, agreed to complete one diary entry—comprised of a response to each prompt and, where relevant, the open reflection—each of five consecutive days each week for the 4-week study period.

Data Collection

The study used Qualtrics survey software to collect participant responses each day. Qualtrics was chosen as the data gathering instrument for this study because it was secure and easy to access. Moreover, Qualtrics was required by the study location for IRB approval. While it was likely the use of Qualtrics would be largely intuitive for the participants, information about the service (i.e., how to enter and use it) was included in the participant packet.

Each morning, participants received a new form, which they filled out and submitted by the end of the day. The Qualtrics form (Appendix B) contained the two open-ended prompts introduced under Instrumentation. The form was accessible from any device connected to the World Wide Web, including computers, tablets, and phones. Once the participants had written their responses to the prompts (as well as additional feelings, thoughts, and perceptions), they submitted their diary entry by clicking on the *next* button at the bottom of the form. Each submission was automatically sent to a secure Qualtrics account.

Finally, a questionnaire was used on the front-end of the study to gather the following demographic and biographic information on each participant: age, ethnicity, relationship status (e.g., wife, daughter, caregiver), and previous higher education

experience (Appendix A). The link to the questionnaire was included in the participant packet sent to each participant who gave consent.

Data Analysis

The data analysis procedure (Miles, Huberman, & Saldana, 2014) was as follows:

1. Diary entries that were submitted to and stored in the Qualtrics account were transferred to a series of Microsoft (MS) Word documents, one for each entry. The MS Word format was more compatible with the analysis software, MAXQDA.
2. The Word documents were then loaded into MAXQDA qualitative analysis software.
3. Codes were derived from the collected data (Miles et al., 2014).
4. Using MAXQDA (Woolf & Silver, 2017), thematic analysis was applied to participant responses based on the codes, conceptual framework, and research questions.
5. An iterative process was followed in which themes and codes were continuously revisited and revised based on analysis of the data.
6. It was likely that some of the participant responses would deviate from the expectations established by the conceptual framework and the research questions. These responses were, in some cases, even at odds with the majority of the collected data. Responses that appeared to be errors in data recording or clear misunderstandings of the prompts were identified as such during analysis. Discrepant or negative cases were used at each iteration of

data analysis as an opportunity to expose assumptions and allow for potentially expanded understanding of the study's focus (Miles et al., 2014).

7. Verbatim examples were chosen to support each theme.
8. Themes and descriptions were interpreted.

Issues of Trustworthiness

Credibility

In qualitative research, credibility reflects the extent to which the findings can be believed, as well as their inherent value (Houghton, Casey, Shaw, & Murphy, 2013). Credibility in this study was ensured by acknowledging biases prior to the study and managing those biases throughout the study. During the data collection, credibility was maintained through meticulous record keeping and establishing a document trail. In the analysis of data, credibility was established by including rich, thick descriptions to support findings, and being clear in the thought processes used to interpret and analyze data. Finally, at the close of the study credibility was maintained by inviting participants to review and confirm data, and by using triangulation to confirm accuracy and interpretation of data (Noble & Smith, 2015).

Transferability

In a qualitative study, transferability speaks to "whether or not particular findings can be transferred to another similar context or situation, while still preserving the meanings and inferences from the completed study" (Houghton et al., 2013, p.13). Transferability was achieved through thick description and variation in the selection of participants. ESM, through the use of interval-contingent diaries, produced a large

volume of data from which thick description was derived. In addition to the use of ESM, a survey designed to gather information about participants' current education setting, prior education, and general demographics was used to add depth to the description of participants and their responses. This data was then regularly sampled when conveying findings in Chapter 4 of this dissertation. Variation in the selection of participants was achieved through criterion-based purposive sampling (Baker & Moore III, 2015).

Dependability

In a qualitative study, dependability, or the stability of data, is generally determined when data is consistent over comparable circumstances (Cope, 2014; Houghton et al., 2013). Dependability is often confirmed through processes similar to those used to establish confirmability. I used decision trails, peer review, and member checks (Houghton et al., 2013) to establish dependability. Decision trails allowed for a careful review of specific steps in the process to ensure the processes used to gather and interpret data were accurate and consistent. Peer review was used to further ensure the processes used were reliable and valid, as well as to confirm the consistency of data gathering and analysis. Finally, member checks were used to determine accuracy and subsequent reliability of the data collected from the diary entries.

Confirmability

Confirmability, which is often linked to dependability, indicates the accuracy and degree of neutrality of data (Cope, 2014; Houghton et al., 2013). While neutrality is desirable, it is important for a researcher to exercise reflexivity and disclose his or her role in the study and impact of this role on the data. The degree of reflexivity that was

required of me was mitigated by ESM, which by its design limited my involvement in data gathering (Zirkel et al., 2015). I confirmed my interpretation of data accurately represented participants' experiences and perceptions by providing rich descriptions that included quotes from participants' entries. Moreover, because ESM requires participants to record their own experiences, I had access to unfiltered participant responses from which to draw quotations to support themes derived from the data.

Ethical Procedures

Accepting that researchers have a responsibility to protect participants and their respective environments in qualitative research, I submitted an application to the Institutional Review Board (IRB) at Walden University. As required by the study site, a separate IRB application that included the Walden University approval letter was submitted. Data collection began only after IRB approval from both Walden University and the study site has been obtained. Again, the Walden IRB approval number was **12-20-18-0342556** and it expires on **December 19th, 2019.** As described above in the Methodology section, I obtained letters of consent from all participants, which stipulated that participation in the study was completely voluntary, including the daily submission of diary entries. While participants were carefully informed up front of what is required of them and how to meet those requirements, some participants chose not to or in some cases were unable to submit entries on a consistent basis. In addition to a letter of consent, over the course of the study I protected all participants' information by consistently following the instrumentation protocol outlined above and making sure all data was kept confidential in a password-protected external hard drive that was stored in

a locked filing cabinet. Finally, pseudonyms were used for the study site and all participants.

Summary

This qualitative study using ESM explored how two stereotype threats affected mature-aged female students entering higher education. More specifically, the study explored how mature-aged female students perceived role conflict and social isolation due to age differences. A qualitative study using ESM was chosen to allow for deeper exploration of participants' lived experiences with life roles as they interact and possibly conflict with their role as student. The conceptual framework supporting this study was comprised of stereotype threat (Steele & Aronson, 1995), perceived belonging (Ernst et al., 2013), and factors that influence mature female students entering higher education, such as lived experiences (Lovell, 2013), personal and professional obligations (Willans & Seary, 2011), and gender-specific roles (e.g., mother, wife, daughter; Lovell, 2013). A central and two related research questions arose from the study's design and framework.

The role of researcher was limited to collecting data, coding and analyzing the data, and drawing conclusions from the analysis. It was also the role of the researcher to identify potential areas of bias and to mitigate these biases. Finally, the researcher outlined the methodology, the process for data collection, and the steps for analysis.

Purposeful, criterion-based sampling (Baker & Moore III, 2015) was used to draw five participants, a sample size characteristic of qualitative studies using ESM. The study used interval-contingent diaries to capture participant responses to two diary prompts that reflected and explored the central and related research questions. A Qualtrics survey,

which allowed participants to respond to the prompts using any electronic device connected to the Internet, collected responses each day of the study. Analysis of data followed a procedure (Miles et al., 2014) that included migrating data into MAXQDA coding software, applying codes to the data, deriving themes from the codes, and interpreting the themes.

Issues of trustworthiness—credibility, transferability, dependability, and confirmability—were addressed to help ensure consistency, neutrality, value and meaningful conclusions (Houghton et al., 2013). For the elements of trustworthiness, specific steps for achieving each were included, such as addressing researcher bias, using decision trails and peer review, and ensuring the inclusion of thick, rich description. Also detailed in this chapter were the ethical procedures required for IRB approval and data collection.

This chapter included a description of the research design used to explore the stereotype threats experienced by mature-aged female students entering higher education, as well as the rationale for that design. This chapter also included the role of the researcher, methodology (participant selection, instrumentation, data collection, and data analysis), and issues of trustworthiness.

Chapter 4 presents the results of the study. It is organized as follows: introduction, setting, demographics, data collection, data analysis, evidence of trustworthiness, and results.

Chapter 4: Results

The purpose of this qualitative study using ESM was to investigate how two stereotype threats affected mature-aged female students entering higher education. Specifically, this study explored how mature-aged female students perceived role conflict and social isolation due to age differences. There has been much research on stereotype threat—the limiting perception that one's actions may reinforce a stereotype about one's group—in academic settings, including research on stereotype threats faced by adult learners in higher education. There has, however, been little research discussing how current life factors manifest as stereotype threats, and the impact these stereotype threats have on mature-aged female students entering higher education (e.g., reduced sense of belonging).

The following central and related research questions were explored to determine the extent to which the two stereotype threats of role conflict and social isolation due to age differences influenced the academic experiences of mature female students (ages 45-54) entering higher education:

- Central Research Question: To what extent do the two stereotype threats of role conflict and social isolation due to age differences influence the learning experiences of mature (ages 45-54) female, first-year undergraduate students in an accelerated business management program delivered at a for-profit institution of higher education?

- Related Research Question 1: How much do mature female students in an accelerated business management program perceive role conflict resulting from their educational commitments?
- Related Research Question 2: How much do mature female students in an accelerated business management program perceive social isolation resulting from age differences, and how does that influence their experiences as students?

This chapter begins with a description of the setting in which the study took place—noting conditions that may have influenced the participants, their experiences, and their responses to the diary prompts—and provides a breakdown of participant demographics. The data collection process is described prior to addressing data analysis, where the coding process used to organize data and allow for the formation of themes is explained. Following the data analysis section is an explanation of trustworthiness as first presented in Chapter 3 and further refined here. The final section of the chapter is the presentation of the results of the study organized according the study's central and related research questions.

Setting

The study was conducted virtually, using an online interval-contingent diary (Laurenceau & Bolger, 2013). Participants attended a national, private, for-profit university that offers both undergraduate and graduate degrees in business, engineering, computer science, information sciences, media arts, communication, and education. The

university offers courses onsite in a blended modality and online. Study participants were enrolled blended, online, and, in two cases, both blended and online.

Participants who attended courses online engaged the professor, classmates, course material, and course assessments solely through the Canvas learning management system (LMS). In the LMS, students interact with the professor and classmates primarily in asynchronous threaded (course) discussions and through the LMS email service. The LMS also provides group/team discussion and online meeting functionality, which some of the participants utilized during the study period. Participants who attended courses in the blended modality engaged the professor, classmates, and course content both onsite and online through the LMS, and the course assessments were accessed and completed online (excluding some in-class, ungraded, formative assessments).

Demographics

The study sample included five female participants. An online Qualtrics survey (Appendix A) was used to gather basic demographic data relevant to the study: age, ethnicity, roles, and previous education. For age, two participants chose 45 – 49 and three chose 50 – 54. For ethnicity, two participants identified themselves as White, two identified themselves as Black or African American, and one identified herself as Native Hawaiian or Pacific Islander. The breakdown of roles was as follows: sibling (n = 5), daughter of a living parent (n = 3), caretaker (n = 2), wife/partner (n = 3), mother/guardian (n = 5), and grandmother (n = 3). Finally, the participants' prior education was: none (n = 2), attended a 2-year institution (n = 1), graduated from a 2-year institution (n = 1), and attended a 4-year institution (n = 2).

Table 2

Demographic Data by Participant

Participant	Age	Ethnicity	Roles	Previous education
1	45-49	Black or African American	Sibling, Mother/Guardian	None
2	45-49	Native Hawaiian or Pacific Islander	Sibling, Wife/Partner, Mother/Guardian	None
3	50-54	White	Sibling, Daughter of living parent(s), Wife/partner, Mother/guardian, Grandmother	Graduated from 2-year institution
4	50-54	Black or African American	Sibling, Daughter of living parent(s), Caretaker, Mother/guardian, Grandmother	Attended a 2-year institution, Attended a 4-year institution
5	50-54	White	Sibling, Daughter of living parent(s), Caretaker, Wife/partner, Mother/guardian, Grandmother	Attended a 4-year institution

Data Collection

The study was designed to gather data from four – six participants. Initially, five participants consented to participate in the study. Of the five participants, four started the study. Of the four who began the study, only three consistently submitted entries through the 20-day period, resulting in too few participants to fulfill the intended study sample. The lower number of participants necessitated a second 20-day study period with a new set of participants who were drawn using the same process as the first set of participants. In the second study sample, four participants consented to be a part of the study, three started the study, and two consistently responded over the 20-day period. The combined number of participants totaled five, which fell within the four – six participants established as the study's sample size.

Participants were asked to respond to two diary prompts (Appendix B) at the end of each day, Monday – Friday for 4 weeks, totaling 20 days of data collection. Diary prompts were submitted using a Qualtrics survey form, with a separate form designated for each day of the study. Participants were identified only through their home location (e.g., Louisville) and were randomly assigned the designation Participant 1, 2, 3, 4, or 5 for the purposes of data analysis and presentation of study results.

As noted in the introductory paragraph to this section, not all participants who initially consented to be a part of the study consistently submitted diary entries at the end of each day. In fact, all but one participant missed at least 1 day over the course of the 20-day period. Of the four participants who missed an entry, three submitted their entry the following morning. Those participants who missed more than 2 of the 20 days were

excluded from analysis, resulting in a sample of five participants at the end of the study. Moreover, contrary to the assumptions identified in Chapter 1, not all participants submitted rich, meaningful responses to the diary prompts. The submissions varied in length from one, brief statement to several sentences. All responses were treated as valid and coded, categorized, and included in the identification of themes.

Data Analysis

I transferred the participant responses to the daily diary entries to three Microsoft Word documents, one for each diary prompt. Each Word document was formatted as a matrix that included columns for participant responses, first-level codes, second-level codes, and notes, and rows labeled according to day and participant (Appendix C). Once I completed the initial coding, I transferred the data contained in the Word matrices into three Microsoft Excel spreadsheets, one for each diary prompt. In each Excel spreadsheet, the data was arranged not by day but by participant, such that each row contained each participant's codes as determined through the initial analysis and each column was labeled according to participant and day of response (Appendix D). Organizing the data in this way allowed me to compare codes across days to determine patterns for each participant. Moreover, this arrangement allowed me to more easily compare codes between participants to determine broader patterns that could indicate themes. In Chapter 3, I indicated that coding and analysis would be completed using MAXQDA software. In the end, however, I chose to use the combination of Microsoft Word and Microsoft Excel to compile and sort codes and themes. Doing so allowed for more time with the data as I worked to develop my own method of organization. This

additional time with the data gave me the opportunity to be more cyclical in my approach, where I began developing codes during the collection process, which helped in establishing more defined codes during analysis. Also, the use of Word and Excel did not require learning new software, nor did it involve additional costs.

According to Saldana (2016), coding is filtered through specific analytic lenses. In this study, codes were developed using Steele and Aronson's (1995) theory of stereotype threat, the research questions, and the diary prompts as lenses through which data were analyzed. Stereotype threat theory served as the theoretical foundation for the central research question. Specifically, the central research question explored the extent to which role conflict and isolation due to age differences were present in the study population, while the related research questions drilled down into the two stereotype threats. Stereotype threat theory also influenced code formation when exploring responses that indicated role conflict, differences between participants and classmates attributed to age, and feelings of isolation resulting from role conflict and/or age differences.

Each diary prompt was designed to answer a specific related research question: Diary Prompt 1 provided data for Related Research Question 1, and Diary Prompt 2 provided data for Related Research Question 2. The Open Diary Prompt was designed to allow for additional information a participant may have wanted to provide about her day, and this data, once coded, could provide insight into either related research question. Combined, the diary prompts were intended to answer the central research question.

There were several categories with corresponding codes, as well as independent codes, established for each diary prompt. The diary prompts were as follows:

- Diary Prompt 1: Describe how you spent your time today in and out of school. In your description, please include how well you felt you managed your time and met your obligations. Additionally, consider how your role as student may have come into conflict with other roles you play.
- Diary Prompt 2: Describe your interactions with your professors, classmates, and school staff today, whether face-to-face or online. In your description, please include the types of interactions, the reasons for the interactions, and how the interactions made you feel.
- Open Diary Prompt: Please feel free to add additional comments about your experiences today.

For Diary Prompt 1, the categories identified in analysis were job, school, roles, and exhaustion. Under the job category, the codes were hours, colleagues, responsibilities, travel, and job seeking. Under school, the codes were hours, coursework, expectations, responsibilities, classmate interaction, and professor interaction. For roles, the codes were wife, mother, daughter, caregiver, sibling, and friend. For exhaustion, the codes applied were mental, physical, and emotional. The independent codes applied to Diary Prompt 1 were time management, faith, errands, self-affirmation, and health (separated from exhaustion as it often reflected illness).

Because Diary Prompt 2 focused on interactions, the categories and codes are all defined as specific types of interactions. It is worth noting that some of the interactions

reflected in the categories for this prompt overlap with codes applied in Diary Prompt 1. The categories for Diary Prompt 2 were classmate interaction, professor interaction, colleague interaction, school staff interaction, and online interaction. The codes applied to each of these categories reflected the type of interaction (e.g., group project discussion), the mode of interaction (e.g., text, chat), and/or the nature of the interaction (e.g., positive assessment, negative assessment, critical judgement, frustrating). The independent codes applied to responses in Diary Prompt 2 were coursework, overwhelm, exhaustion, health, and faith.

The Open Diary Prompt generated a number of categories and codes that overlapped with those applied to Diary Entry 1 and Diary Entry 2, such as school, job, and exhaustion (categories) and faith, health, and self-affirmation (independent codes). There were also several unique codes that emerged from responses to the Open Diary Prompt. The codes that did not overlap with the first two diary prompts were age differences, gratitude, geographical separation from spouse and/or children, death of a loved one, and self-care. Several of these codes were unique enough to be deemed discrepant. Discrepant codes discussed further later in this chapter.

Table 3

Prompts, Categories and Codes

Prompt	Categories	Codes
Prompt 1	Job	Hours, colleagues, responsibilities, travel, job seeking
	School	Hours, coursework, expectations,

		responsibilities, classmate interaction, professor interaction
	Roles	Wife, mother, daughter, caregiver, sibling, friend
	Exhaustion	Mental, physical, emotional
	Independent	Time management, faith, errands, self-affirmation, health
Prompt 2	Classmate Interaction	Constructive, positive assessment, negative assessment, supportive, coursework assistance, class discussion, text, email
	Professor Interaction	Constructive, positive assessment, negative assessment, frustration, language barrier, email
	Colleague Interaction	Personal, positive assessment
	Staff Interaction	Constructive, positive assessment, limited frustration
	Online Interaction	Constructive, positive assessment, negative assessment, limited, impersonal
	Independent	Coursework, overwhelm, exhaustion, health, and faith.

Open Prompt	Job	Hours, colleagues, responsibilities, travel
	School	Hours, coursework, expectations, responsibilities, classmate interaction
	Exhaustion	Mental, physical, emotional
	Independent	Age differences, gratitude, geographical separation from spouse and/or children, death of a loved one, and self-care

Themes were derived from patterns that emerged within the categories, their corresponding codes, and the independent codes. In order to establish themes, codes were placed into an excel spreadsheet, as noted in the opening of this section. Placing codes into a spreadsheet and arranging them by participant and day allowed for clarification of categories identified early in the process, which codes were best aligned with which categories, and which codes remained outside of an established category. The categories and codes were then aligned with a specific prompt to create a clear structure for thematic analysis and discussion of results (Table 3). Finally, codes and categories were carefully analyzed for the emergence of common features and patterns that might indicate a theme. For instance, under Diary Prompt 1, the category Classmate Interaction was aligned with the following codes: Constructive, positive assessment, negative assessment, supportive,

coursework assistance, class discussion, text, email. Together, the category and its associated codes indicated the nature and type of participants' interactions. Reflecting more closely on the codes and how they reflected the nature and type of interactions led to five themes, including *interaction with classmates can be perceived as positive* and *most common type of interaction is with classmates in school setting*.

Like categories and codes, the themes were organized according to diary prompt. The themes that emerged from Diary Prompt 1 were as follows: faith is important to well-being, navigate multiple roles, frequently experience overwhelm and exhaustion, struggle to effectively manage time, school and job represent most frequent activities, and coursework dominates school activities. The themes pulled from Diary Prompt 2 were: interaction with school staff perceived as positive and constructive, interaction with classmates can be perceived as positive, interaction with classmates can be perceived as negative and frustrating, interaction with professors perceived as positive and constructive, and most common type of interaction is with classmates in school setting. Finally, the themes that emerged from the Open Diary Prompt that were different than those already identified for the other prompts were: geographical separation from family causes emotional distress, self-affirmation and self-care associated with performance, concerns about performance related to age, adopting the role of mother/parent, difficulty navigating role of student amidst other life roles.

Because it was outside of the two central diary prompts that were aligned with the research questions, the Open Diary Prompt led to a number of discrepant responses, or responses that did not align with existing codes and/or the research questions. These

responses were given independent codes and were then used to add additional, nuanced support for the themes. They also contributed depth to the discussion and conclusions offered in Chapter 5. In many cases, the responses addressed participants' feelings about their sense of self, their education as a whole, their sense of direction for their lives, their age, and their participation in the study.

Evidence of Trustworthiness

The first step in the plan to ensure credibility was to acknowledge biases prior to the study and manage those biases throughout the study. Potential areas of bias were mitigated during the IRB phase of the study, where they were identified in participant-facing documents. The use of an electronic journal established a document trail for the study as a whole, though the journal proved especially useful during data collection and analysis. Notes were also used during data analysis to keep track of discrepant responses and emerging codes. As noted later in this section as well as in the discussion of results, credibility was further ensured by including descriptions to support findings, and using the journal to clarify thought processes used to interpret and analyze data. Triangulation was not used in the study as described in Chapter 3, as other sources of data, save for basic demographic information, were not accessed during the analysis. Finally, after the completion of the study, participants were given access to a summary of the design and results, which allowed them to ask questions and seek clarification.

Transferability was ensured through rich description and through variation in the selection of participants. Interval-contingent diaries produced a large volume of data from which representative description and examples in the form of direct quotations were

derived. In addition to the use of interval-contingent diaries, a survey was used to gather information about participants' age, ethnicity, roles, and prior education in order to add depth to the description of participants and their responses. This data was also referenced when conveying findings in Chapter 5. Variation in the selection of participants was achieved through criterion-based purposive sampling (Baker & Moore III, 2015).

Dependability was established through processes similar to those used to establish confirmability. I used decision trails and peer review (Houghton et al., 2013) to establish dependability. Decision trails as documented in an online journal (see paragraph on credibility above) allowed for a careful review of specific steps in the process to ensure the processes used to gather and interpret data were accurate and consistent. Peer review was used to further ensure the processes used were reliable and valid, as well as to confirm the consistency of data gathering and analysis. For the peer review, I asked two peers who held PhDs in education to review the study's design, data gathering process, and data analysis process. The peers provided feedback, which I incorporated into both Chapter 3 and Chapter 4.

The confirmability of the study was determined based on the neutrality of the researcher and the accuracy of the data. As noted in Chapter 3, the study's design, ESM Zirkel et al., 2015) limited my involvement in data gathering to the creation of the diary prompts, the sending of the diary prompts each day, and the collection of diary responses each sudsequent day. In the results section of this chapter, the accuracy of my interpretation of the data was confirmed through the presentation of participants' experiences and perceptions in the form of rich descriptions that included direct

quotations pulled from participants' diary entries. Moreover, the use of ESM gave me access to unfiltered participant responses from which to draw quotations to support analysis of the data.

Results

As in the Analysis section of this chapter, the results of the study have been arranged according to diary prompt. Moreover, in this section the themes, which have been ordered from most to least prevalent, provide a second level of organization. Context, analysis, and conclusions have been provided for the participants and their responses. Finally, representative examples from all participants relevant to context and the analysis of participant responses have been provided.

Diary Prompt 1

Theme 1. The first theme taken from Diary Prompt 1, navigate multiple roles, was the most pervasive of the six themes. Its scope is broad, but given the emphasis on roles in Related Research Question 1, it was essential that the roles the participants adopted and navigated be tracked and represented here. The theme was regularly present in the responses of all participants, further indicating its importance in the study. The roles adopted by the participants were: wife, mother, homemaker, daughter, caretaker, sibling, friend, employee, and student. In many cases several roles were present in a single response.

The presence of multiple roles and their impact on the daily functioning of the participants is evident in a response from Participant 3, where she describes part of her day in this way: "I got up at 7 worked on homework until 9 am fixed breakfast after

Breakfast did homeschool until 1 pm. Laid down until two. I got up and got ready for work. Went to work at 3pm…until 12:30 am." In this description, the navigation of several roles appears to lead to exhaustion and possible burnout, a theme discussed later under Theme 3. The variety and impact of multiple roles can also be seen in responses by Participant 2, who states, "I have a lot of things on my plate from taking care of my mom to going to school," and Participant 5 who relates, "I take my role as a student and a mother very seriously and I try to budget every thing [*sic*]." In each of these examples, participants attempted to navigate multiple life roles, often in order to maintain others' demands on and expectations of their time.

Theme 2. The second theme, struggle to effectively manage time, was nearly as pervasive as navigate multiple roles, and the two themes are clearly related. The frequent appearance of this theme is not surprising given the complex lives led by all of the participants. This theme is also closely related to Theme 3, as struggles in time management appeared to precipitate exhaustion and overwhelm. The theme was richly and complexly represented in the responses of all participants, save for Participant 1, who often expressed the theme in direct, simple terms (i.e., "Work and homework"). The ways in which the participants reflected time management varied, with school, work, home, and family being the most common areas where time management was noted. Of particular note in this theme was how often participants expressed struggles with time management as a sequence of time commitments, often written as a schedule:

> I workd [*sic]* 8 hours. I then stopped off a Sam's to pick up 10 cases of water because the sale ends onteh [*sic]* 2nd. After struggling to get 10 cases of water in

> the back of my SUV I drove home...I came in checked the ma[i]l and started to cook. While my food is cooking and talking with my mom to see what day I need to eitehr [*sic]* leave work early or go in late to get her to her doctor's appointment. I then took a two hour call about school (Participant 4).

The presence of scheduling language can also be seen in a response from Participant 3, who described her day as follows:

> I was off from work so I did homeschool from 9:30 am - 1:00 pm then lunch from 1:00- home work from for my math 014 class 2:00pm - 6:30 fix supper and eat from 6:30 -7:30 Then back to homework from 7:30pm- 11:30 pm bedtime.

In the participants' responses under this theme, there was the sense that these women were having to navigate lives that were frequently overscheduled and overwhelming. This may explain the presence of exhaustion and overwhelm evident in Theme 3. It is also clear in the examples above that the participants felt an obligation to maintain commitments after starting school.

Theme 3. The third theme, frequently experience overwhelm and exhaustion, occurred in several responses to Diary Entry 1, and it presented as two types: mental and physical. The theme was present in the responses of all participants except Participant 1. The theme was most prevalent in the responses of Participant 2 and Participant 4, who often spoke of being ill and/or tired. Regarding her physical health, Participant 2 explained, "I didn't feel too good and went to bed after changing my clothes," and she later related, "I am so exhausted, in pain and sleepy. I feel my only conflict is the

physical struggles that I am experiencing." Participant 4 frequently spoke of being tired. In one response, Participant 4 stated simply: "[G]ot up late as I just wanted to sleep…."

The range of issues that precipitated these states in the participants varied, with personal health, school, job, and commitments to others being just a few of the causes offered. In relating the added demands school placed upon them, Participant 4 stated, "I don't know what the school requires is to work [*sic*] in groups but it is added pressure…," and Participant 2 related, "I am now home. I am exhausted. I didn't do any of my school work but I will get up early to get started." Participant 5 echoed these remarks when she said, "I spent my time as usual in class in the morning and then stopping long enough to go to the doctor." This sentiment, that school was the source of exhaustion and overwhelm, was shared by four of the five participants and is present in several other themes. As demonstrated here and elsewhere in the results, it was as if school were the proverbial *straw that broke the camel's back* for the majority of the participants.

Theme 4. The fourth theme, school and job represent most frequent activities, was related to theme one, but the consistent identification of these two roles and the actions associated with them warranted moving these commitments into their own theme. School was identified with much greater frequency than job. In most cases, participants spoke at length about their activities within these roles. As is true with other themes, there was tremendous variation in how participants described their time at work and at school.

In the case of Participant 1, she daily identified only work and school as comprising her day: “Working than [*sic*] Starbucks doing homework.” Others described their time in school in much more complex terms that reflected the dominant role school had come to take in their lives. At one point, Participant 4 described her time in school in terms of its impact on her schedule: “I was up until 2:00 working on my group project which’s not completed but I have done all that I could do.” For Participant 2, school had become an integrated part of her routine: “Tonight I will go over what is expected in my courses for the week.” And, for Participant 5, school was described as a process and set of expectations: “I took my time and read each question and took my time and took my final exam today.”

In regard to work (job), participants frequently spoke of the amount of time their job took up in their schedules: “I also work about 36 hours a week…” (Participant 3). They also described their jobs as sources of additional pressure and stress: “Out of school -this would be work today. I was productive but not as much as I would liken [*sic*] to be. We are understaffed and his [*sic*] means multitasking” (Participant 4). Finally, participants described their jobs in terms of opportunity and sources of change: “I had a phone interview in while on break at my job” (Participant 5).

Theme 5. The fifth theme for Diary Prompt 1 was coursework dominates school activities. This descriptive theme, while narrower in focus than the other themes, arose in almost all responses in which school was mentioned. This theme dominated participants’ experiences with school and the way they chose to describe themselves as students. For instance, Participant 1 stated, “I feel bad i didn't get a chance to review any of my

studies," and Participant 5 related, "I spent part of my day in class as usual…" In each of these examples is the sense that school had become an integral part of the participants' lives. This is further indicated by participants' frequent mention of coursework as an established part of their daily routines: "In the morning, I review my notes and reread some of the chapters for my final in my Nutrition class" (Participant 2); "Today I got up at 7am [and] worked on homework from 7am through 9:10" (Participant 3); and, "I worked on the paper until it was time for me to get dress [*sic*]" (Participant 4). While it is perhaps natural that school work be such a central concern of new students, the participants' frequent mention of it seemed to indicate it held a higher priority on a daily basis than other tasks. This may also indicate that the role of student had taken a preeminent position in their lives.

Theme 6. The final theme to arise out of data drawn from Diary Prompt 1, faith is important to well-being, was present only in Participant 2, but it was so significant to her sense of self and how she identified with her roles and experiences that it has been included here. The theme was present 4 times in her responses to Diary Prompt 1, but it also appeared in her responses to Diary Prompt 2 and the Open Diary Prompt.

In most instances, Participant 2 prioritized her faith and her involvement in the church as a way to bring meaning to and anchor her busy life. For instance, after a particularly challenging day, she related that, "Although church is not mandatory, I have [*sic*] to attend because I needed to hear God's word." In another instance, she described church as a refuge, an escape, where she felt she could recharge herself: "I am emotionally and physically tired. I can't wait to get a reboot from church service." Of

special note in this theme is that Participant 2 was the only participant in the study to identify a positive source of escape from the demands of family, work, and school, as well as a source of renewal from fatigue and overwhelm.

Diary Prompt 2

The themes derived from Diary Prompt 2, as indicated in the Analysis section of this chapter, were focused specifically on type, frequency, and quality of interaction with others. There were a total of seven themes defined within the responses to Prompt 2, and these themes described interactions with specific groups of people: school staff, classmates, professors, family, and colleagues. It is worth noting at the outset that interaction with family and colleagues was rarely mentioned in response to this prompt, which represents a significant change in focus from responses to Prompt 1.

Theme 1. Theme one, most common type of interaction is with classmates in school setting, was the most pervasive theme derived from Prompt 2, as it in large part encompasses Themes 2 and 3 for this prompt. Whereas Themes 2 and 3 indicate the quality of the interaction between participants and students, Theme 1 has been separately defined to indicate not just the frequency of interaction with classmates but also the type of interaction that occurred, which was almost exclusively within the strict confines of the classroom setting (i.e., Canvas, the online learning management system). This theme appeared frequently in all five participants' responses.

The responses supporting this theme showed limited variation. In most cases, Theme 1 was seen in brief statements indicating that interaction with classmates had occurred and where it had occurred. For example, Participant 1 simply reflected,

"Participating in discussions in class," and Participant 3 wrote, "I responed [*sic*] to group discussion going on this week. I had no other interraction [*sic*] with students." The statements under Theme 1indicate interaction with classmates was a regular, if not daily experience for the participants. Lastly, while statements under this theme seemed to imply that communication and interaction between participants and peers was brief, often basic in nature, Themes 2 and 3 offered a much more complex picture.

Theme 2. Interaction with classmates can be perceived as positive, was one of two themes associated with quality of interaction with classmates. To some extent, four of the five participants described interactions with classmates as positive. Participant 1 was the only one to not offer any description of the quality of her interactions. The length and complexity of responses reflecting this theme were varied: some responses were brief and more general, while others were lengthy and detailed. Moreover, the responses varied in the level of positivity and language used to describe the positive interactions. For instance, Participant 3, while brief in her response, is clearly positive about her interactions with classmates when she states, "I have really enjoyed this class especially the discussions. I always try to encourage my fellow students with this class…" In contrast, Participant 5 is much more pointed and far less effusive when she describes her positive interactions with classmates as "The interaction with…my classmates has been good." In reference to more specific and complex reflections on interaction, Participant 4 offered the following assessment of a fellow classmate: "The only other person in rehearsals group he is trying to make sure rest [*sic*] we pass this class is Byron…", and Participant 2 described here interaction with a classmate in this way:

> I spoke with a classmate who needed help and gave her tips on how to catch up. Another classmate texted and needed clarification on this week's assignments. I[t] was nice to hear from them both as our class was cancelled…

Participant 4 is unique here and in the themes that follow in that she often refers to specific incidents and offers detailed descriptions. She appears to be observant and, when emotionally connected to an event or interaction, moved to provide forthright evaluations of others and their actions.

Theme 3. The third theme, interaction with classmates can be perceived as negative and frustrating, occurred more frequently than Theme two, and this theme occurred most frequently in a single participant. While three of the five participants spoke of negative interactions with classmates, Participant 4 described the majority of her classmate interactions as either neutral or negative. Participant 4 was also the most specific and extensive in her negative reflections.

In this response, Participant 4 shares both her evaluation of her classmates and her frustration with their behavior:

> My group or the group that I am assigned to waits y til [*sic*] Sunday exert [*sic*] week to try to complete our project. I post what we need every Thursday and I start texting. Every Tuesday asking for what we need. But again nothing is done until Sunday. Sunday morning. The messages begin rolling in asking what do we need to do what is left to do?

The language she uses here (e.g., "again nothing is done") was pervasive in her responses containing reflections on classmate behavior. Also in her negative evaluations of classmates, Participant 4 often compared their behavior and choices to her own:

> The young lad[y] who didnt [*sic*] have her part again said she has three kids so this is why she is late with submitting her part. Listen just last year i was in school and had my two granddaughters full time and a full time job.

As will be seen later under the Open Diary Prompt, at times Participant 4 saw herself in the role of mother, forced to guide the behavior of younger classmates, which may explain her often negative evaluation of their behavior.

The other participants were less pointed in their negative assessments, and in many cases, their negative assessment was tied to the online modality and/or the learning management system. For instance, Participant 2 related, "The only interaction I had today with my [classmates] is thru [*sic*] the discussion. It is frustrating waiting for [classmates] to post a comment, knowing the requirements in order to get the points for the week." Similarly, Participant 5 expressed frustration with the asynchronous nature of online learning when she said, "I sent each member of the group a seperate [*sic*] message. Only one responded…" Challenges with the online learning environment were expressed in several responses, but these challenges were almost always in direct connection with other themes and, therefore, were not established as a separate theme in this study.

Theme 4. The fourth theme, interaction with professors perceived as positive and constructive, occurred frequently within all but one of the participant's responses (consistent with the other themes, Participant 1 was the outlier). The only exception to the

near uniformly positive and constructive interaction with professors came from Participant 4, who stated at just one point that she was hesitant to interact with her professor because of a "language barrier." As noted under Themes 2 and 3, Participant 4 was prone to providing pointed and, often, critical evaluations of those with whom she interacted. In most cases, participants described their interactions with professors in brief but positive terms: "I have good interaction with my…professor every day…" (Participant 4); "I have a good relationship with my…professor" (Participant 5); and, "All my interactions [with the professor and classmates] have been pretty Positive (*sic*) so far" (Participant 3). In one case, Participant 2 went beyond the more germane response and expressed her genuine appreciation for her professor and classmates: "Had class tonight... so blessed that my professor is has patience for me... she and my [classmates] really helped me to realize that i [*sic*] overthink things n [*sic*] need to refocus n [*sic*] keep it simple." The nearly universally positive portrayal of interactions with professors may be a function of age, where participants were raised to respect educators and those who are perceived as having authority.

Theme 5. The fifth theme, interaction with school staff perceived as positive and constructive, was not as common as interactions with classmates and professors, but the tone and nature of responses including staff was distinct enough to represent a separate theme. There were three staff positions referenced in the participant responses: Information Technology Support Specialist (IT), Tutor, and Student Success Adviser (SSA). Of the five participants, only two participants—Participant 2 and Participant 3—mentioned school staff in their responses. This may have been because only these two

participants had needs that put them in contact with school staff during the study period. It may also have been that only these two found the interactions with staff significant enough to note in their diary entries. References to staff interactions varied from neutral and constructive to overtly positive. In referring to her interaction with her SSA, Participant 2 related the event in more neutral terms: "I did call to see if I had other options for classes... was not sure if I wanted to switch out a class or keep my schedule." In contrast, Participant 3 was much more positive in how she described her interactions with staff: "…what Interactions I have with staff and the tutors at [study location] has been alwqys [*sic*] positive I have never had a negitive [*sic*] experience. The tutors are always helpful…." In no response were school staff reflected in negative terms. Similar to interactions with professors, this positive portrayal may be indicative of the participants' age and their understanding of the value of support in achieving their goals.

Open Diary Prompt

The Open Diary Prompt, as expressed under Data Analysis, was unique for several reasons, such as the type/nature of responses the prompt generated. Among the most unique aspects of the prompt was that only two participants, Participant 2 and Participant 4, contributed more than a single response. Despite the relatively limited data generated, the open prompt resulted in five themes.

Theme 1. The first theme to emerge from the Open Diary Prompt, difficulty navigating role of student amidst other life roles, was perhaps the most pervasive and diverse. For both Participant 2 and Participant 4, this theme was connected with feelings of exhaustion, overwhelm, frustration, and dissatisfaction.

For Participant 2, trying to juggle all of the commitments in her life, including maintaining her health, appeared to be overwhelming for her at times: “I also have my mom's health issues. This and everything else just adds to all the stress and it just feels like I am not getting anything done.” For participant 4, the struggle to manage school amidst other commitments manifested itself in some unexpected ways. For instance, in one case, she reflected her involvement in the study as one of her many roles that had to be managed: “I received your email, I have been late on my journaling. My plan is at 10:00 each night to compelt [*sic*] the journal and return to my homework or housework.” Perhaps best capturing the essence of this theme, and to a large extent the entirety of Diary Prompt 1, was an entry by Participant 4 in which she expressed the following:

> I am exhausted and my life is work, school, taking care [of] two parents, being a sounding board for a sister, a brother and my grown son. If my life doesn't change in some way soon I do not know how much more my mind will be able to handle.

As evident above and under other themes throughout this section, the sense of exhaustion, overwork, and overwhelm felt by the participants as they struggled to manage their lives was profound.

Theme 2. The second theme to emerge from the Open Diary Prompt was geographical separation from family causes emotional distress. This theme occurred only in association with Participant 2. In her responses under this theme, Participant 2 expressed challenges associated with separation from her children, her husband, and her mother. Specifically, in each of the examples below, Participant 2 framed the importance

of her roles as mother, daughter, and wife in terms of her separation from those she cared about.

In reference to her children, Participant 2 expressed sadness and regret that she could not be with her daughter in her daughter's time of need:

> Being in different timezones [*sic*] from my children is difficult and no matter the time, my work is never done. It pains my heart that my girl was having difficulty breathing and all I was able to do was to talk to her to calm her down.

Further establishing that separation from her loved ones caused Participant 2 emotional duress, she related an incident involving her mother, who lives in another state: "Another stressor this semester is my mom's health. She lives in Florida. 2 weeks ago she was rushed to the hospital from her nursing home. Since I live in KY it's hard for me." Finally, adding to her sense of isolation and emotional strain was the deployment of her husband and daughter, who appeared to be active military. In this instance, she showed concern about the lack of contact with loved ones when she described "…not hearing from my daughter who is deployed and my husband leaving for training."

Theme 3. The third theme, self-affirmation and self-care associated with performance, was also expressed only by Participant 2. The codes supporting this theme included positive self-talk, self-care, setting limits, and gratitude. This theme appeared to fulfill needs similar to those fulfilled by her focus on faith as noted in Diary Prompt1.

Her regular use of self-affirmations and positive self-talk indicated that Participant 2 may have been concerned about starting her academic program. She may have felt she was unprepared, academically and emotionally, to take on the rigors of

college. At one point, she reflected these concerns when she stated, "Today made me realize just how strong I am mentally and emotionally. When things were difficult, I just had to stay focus[ed] and take each day and task one at a time. I feel empowered." Often, Participant 2's positive self-talk was focused on self-care, as is evident in the following example: "[I] am stressed because of what is going on personally and i need to be good to myself and just keep my work simple and stress free." There were also moments when Participant 2 gave herself pep talks to engage agency and produce positive results, such as setting boundaries: "Taking an active stand to limit calls and contact during the time I set aside to work on my studies has been an eye-opener. Limits are good... for everyone." Finally, Participant 2 frequently expressed gratitude for what she had, what she had been given, and for the people in her life:

> I truly am blessed. The staff and faculty on campus are amazing... all of them. I appreciate them all, I will 1 day bless them when I become successful in my career. Going back to school has given me a real boost in life - I am focus [*sic*], positive, eager to learn, and believe in myself again. I thank God and my husband for making this possible.

Participant 2's expressions of gratitude as seen in the example above and elsewhere in her responses to the Open Diary Prompt appeared to be closely linked to her faith, as she often used the terms *blessed, blessing,* and *God.*

Theme 4. Concerns about performance related to age was the fourth theme to emerge from the Open Diary Prompt. Although this theme was not pervasive, its direct alignment with age-based stereotype threat made its inclusion necessary. This theme was

expressed only by Participant 4. As noted under Diary Prompt 2, Participant 4 was critical of her classmates, often reflecting on their immaturity, lack of motivation, lack of organization skills, and lack of commitment to their education. In many cases, her criticisms of others were entwined with concerns about her performance in her courses. In two specific instances, Participant 2 used age references to express her feelings of dissatisfaction and concern: "Honestly in my both my groups I feel like the old duckling;" and, "…it could be that I am much older than the group so it approach [*sic*] is different." In both of these examples, age is prominently featured as a point of separation between herself and her classmates. Moreover, there is the sense in these examples that Participant 2 felt self-conscious about her age and the role it might play in her performance as a teammate.

Theme 5. Adopting the role of mother/parent was expressed by both Participant 2 and Participant 4. For Participant 2, this theme was expressed as a sharing of knowledge/wisdom in order to guide a peer's actions: "I shared what I learned in science class with her regarding eating disorders and other things that we as mature women need to do to take care of ourselves." For participant 4, however, this theme appeared to be primarily associated with course work and classmates: "I am in mother Mood 'let's hurry and get this done' and 'let's not wait until the last moment.'" Participant 4 also reflected the role of parent when she disclosed feeling as though she must be a parent to her entire family:

> I needed to sit down and find out what is goin [*sic*] on with my parents but this week I have not been caring/checking/following up on their needs as my sister and brother and my job has required a lot more time this week.

In each of these examples, there was a sense of role confusion, where the participants took on the role of mother/parent in situations where it was either inappropriate or unwarranted. This seemed to further indicate, as was noted in Diary Prompt 2, that participants struggled to navigate and, in these cases separate, their many roles.

Summary

At the outset of this chapter, setting and demographics were described to provide a context for the study. Based on the research question and related questions, the diary prompts served as the foundation for inquiry. Participants responded to the prompts daily for 20 days, and these responses resulted in a large volume of data. The data was analyzed and a series of categories and codes were generated. From these codes, themes were developed, described, and analyzed.

The diary prompts and themes served as the organizational structure for providing the results of the study. The results were delivered as rich descriptions followed by representative quotes from the participants. Because the diary responses provided unfiltered data, the participant quotes were written as collected. Issues of trustworthiness first addressed in Chapter 3 were revisited to determine their continued application to the study, its results, and the analysis of the results.

Chapter 5 provides an interpretation of the results as framed within the literature reviewed in Chapter 2 and the theoretical framework comprised of the theory of

stereotype threat, the concept of perceived belonging, and several factors that influence mature female students entering higher education, the most prominent of which are lived experiences, personal and professional obligations, and gender-specific roles. The limitations placed on the study in Chapter 1 are revisited, and recommendations for further research are explored based on research relevant to the data and findings addressed in this chapter. Finally, implications for social change are discussed.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative study using ESM was to determine the extent to which mature female students in higher education experienced role conflict and social isolation due to age differences. The study addressed one central and two related research questions that looked at how participants used their time and the type and quality of their interactions each day, 5 days a week, for a period of 4 weeks. The participants, who were enrolled in a business baccalaureate program at a national, for-profit institution, responded to two focused diary prompts and one open diary prompt. Each diary prompt mirrored one of the related research questions. The prompts yielded rich data from which several themes were identified, and when analyzed, these themes reflected patterns and shared experiences among participants.

Participants had to navigate multiple roles, including mother, wife, daughter, caretaker, sibling, student, employee, and friend. Often, participants had to navigate multiple roles at the same time, which appeared to dramatically impact their overall well-being, as they regularly spoke of being tired, overwhelmed, exhausted, physically ill, and emotionally drained. Participants also expressed concerns about time management, indicating they felt they had to maintain each role equally; there was the sense that every role was important and needed their full attention.

Participants, while at school, interacted with three groups: staff, professors, and classmates. Participants' interaction with staff and professors was largely positive and often described in pragmatic terms (e.g., scheduled for courses or clarified an assignment). When more overtly positive language was used, staff and professors were

credited with helping a participant succeed in reaching her goals. Interaction with classmates was more challenging. Participants often spoke about classmates negatively and/or critically, citing lack of motivation, inability to complete work in a timely manner, disorganization, and lack of commitment as the impetus for their negative assessments.

Interpretation of the Findings

The findings of this study sought to address the central and related research questions. Findings were used to explore the extent to which mature female students (Newberry, 2013) experienced role conflict (van Rhijn et al., 2016) and isolation due to age differences (Lamont et al., 2015). From the findings, patterns emerged that were, for the most part, supported by the literature. In some instances, however, patterns emerged that deviated from established literature.

The presence of role conflict was evident in all participants. In most cases, role conflict occurred as a result of participants taking on the new role of student, which tended to disrupt the balance between existing roles. This effect of losing life balance and no longer being able to juggle multiple roles, has been widely noted in research on mature students (Markle, 2015; van Rhijn et al., 2016). In the research, mature students felt that maintaining roles was essential to their well-being and sense of self-worth. They felt the need to maintain balance in order to remain connected to the life they led prior to entering college. In this study, participants frequently spoke of roles and obligations as interfering with their school studies, as well as the reverse: school interfering with what they cared about most (Webber, 2017).

From loss of balance between roles can arise a phenomenon known as role overload (van Rhijn et al., 2015), where the individual feels pulled in too many directions and begins to reduce commitment to one role in favor of increased commitment to another role. This redistribution of resources can lead to feelings of loss and guilt (Webber, 2017). It can also lead mature students to enroll part-time and/or in 2-year as opposed to four-year programs. In this study, participants spoke often of feelings that could be attributed to role overload, such as exhaustion, remorse over not being there for loved ones, and diminished engagement at their jobs. Past educational experiences gathered prior to the start of the study also indicated that many of the participants started and left college at least once prior to enrolling at the site university. However, at the time of the study, the participants were all enrolled full time, and further deviating from the literature in this area, several responses from participants indicated some were successfully balancing life roles, even with the added demands of being a student. It was as if the participants were learning to adapt to their life with the added role of student (Kahu et al., 2014).

Another systemic effect of role conflict is social isolation, not just within the school environment but also within the home (Webber, 2017). In many cases, mature students feel as if others do not understand them and their circumstances (van Rhijn et al., 2016), which may lead them to pull away from classmates and systems of support within an institution. Mature students may also feel judged by family who do not understand the responsibilities of being a student, and this may lead them to isolate themselves from the very people who can provide the highest level of support. While the participants in this

study spoke of feeling isolated from classmates who may not understand the challenges they faced, they did not speak about feeling isolated from or judged by family who did not understand the demands school placed upon them. In fact, participants often spoke of turning to family and to resources at the site university to receive much needed support and encouragement.

Isolation due to age differences has been well-documented within the literature, especially as related to age-based stereotype threat (Kulick et al., 2015; Lamont et al., 2015). In the literature, age differences are normally explored in terms of impact on individuals. Some of the specific areas of impact most noted in the literature are reduced working memory (Armstrong et al., 2017), cognitive functioning (Lamont et al., 2015), and reduced engagement within situations where differences in age were apparent (Burgess, 2017; Kulick et al., 2015). In this study, participant responses reflected two of these three effects. The first effect evident in the participants' responses was reduced cognitive functioning. In several responses, participants spoke of struggling to complete class assignments and feeling as though they could not work long enough or fast enough to meet deadlines. They also described feeling continuously behind and being worried if they would be able to catch up. The second effect was reduced engagement when age differences were apparent. This effect was noted in participants' descriptions of their relationships with classmates. Often, these descriptions occurred within the context of group work, where participants were required to interact with classmates in complex ways that included communication outside of the classroom. In these instances, participants spoke of being frustrated with the perceived irresponsibility and lack of

motivation in their younger team members. They also spoke frequently about feeling forgotten or stranded by the lack of communication with team members, as well as the significant gap in engagement in and commitment to assigned tasks.

The conceptual framework used in this study was comprised of stereotype threat (Steele & Aronson, 1995) and perceived belonging (Ernst et al., 2013). The participants in this study exhibited stereotype threat in two areas. The first area was in the perception (self and others) that their attempt to take on the additional role of student might be viewed as shirking responsibilities elsewhere or not fully *being there* for those in their lives. As described previously in this section, participants disclosed they felt they could not be a student and effectively maintain the other roles they had adopted prior to entering college. This perception manifested as stereotype threat in that it drew cognitive resources from participants as they attempted to navigate their coursework (Schmader et al., 2015; Shapiro et al., 2013; Steele & Aronson, 1995). Moreover, participants' perceptions that others might see them as not being available to loved ones, especially spouses and children, led them to be critical of and even develop negative perceptions about self and others, a social effect commonly associated with stereotype threat (Gupta et al., 2014). The second area where stereotype threat occurred was in the perception that age served as a limiting or distancing factor between the participants and their classmates (Burgess, 2017). Older individuals often see themselves or perceive others as seeing them as having poorer memories, being less mentally agile, and even being less physically capable (Barber & Mather, 2013; Lamont et al., 2015). The participants in this study made reference to the behaviors of classmates as compared to their own, often noting

differences that indicated an age gap, such as lack of commitment, low maturity, and lack of social adeptness. The participants tended to feel less engaged with classmates due to the perception that they were older and would be seen as not being able to relate.

Perceived belonging is the extent to which one feels included in a specific group. Lowered perceived belonging (Ernst et al., 2013) is often a result of stereotype threat, and it describes the distancing of an individual from others based on limiting perceptions linked to a range of factors including age, gender, ethnicity, and performance. A reduction in perceived belonging often arises from the belief that one will not fit in to a group, will not be accepted by the group, based on these factors. In this study, the factors that contributed to a decreased sense of belonging were performance in class work, responsibilities outside of the classroom, and age, all of which were also associated with stereotype threats, as noted in the previous paragraph. In this study, participants often felt separate from classmates. They felt like the old person in the class having to manage those who are younger and less experienced, or they felt they had to work harder to keep up with those who did not have the same level of responsibilities they did. Of the factors identified here, performance is perhaps most supported by literature in this area. Women have traditionally been judged as lower performing professionally and academically than men and those younger than them. In many cases, this perception of lower performance has been noted in the use of technology, as well as in science and technology fields (Beasley & Fischer, 2012; Huffman et al., 2013; Lewis et al., 2016). These perceptions of reduced performance, often internalized by women seeking to enter these areas, serve both as stereotype threats and as the basis for a diminished sense of belonging. The

participants in this study often spoke to concerns about performance on tasks and within groups. They worried they would not complete assignments, achieve desired grades, or be an effective team member. These concerns about performance often contributed to feelings of overwhelm, exhaustion, and isolation.

Limitations of the Study

As noted in Chapter 1 of this study, the drawing of participants from the study site represented a potential conflict of interest and an opportunity for bias. The use of criterion based, purposive sampling helped to mitigate both issues. The potential for conflict of interest existed as I am an instructor at the study site. To help ensure that a participant would not be a current student in one of my courses, the criterion that the prospective participant not be enrolled in one of my courses during the study period was added to the list of criteria. The potential for bias existed for the same reasons as conflict of interest, in that if a participant was known to me as a former or current student, my interpretation of her data would be skewed. The potential for bias was addressed in three ways. One, the study site compiled the list of prospective participants and sent the invitation out to the participants, such that I had no involvement in the initial outreach. In this way, I could not pick specific students to be involved in the study. Two, the invitation was sent to all students who met the criteria, resulting in a very large pool of potential participants and reducing the chance that one of the participants would be known to me. Third, the participants were known to me only by their email and location, which was a function of the Qualtrics survey software. This dramatically lowered the chance that I would be able to identify any of the participants.

The second limitation encountered in the study was the unequal depth and complexity of participant responses. The diary prompts provided guidance on the type of responses expected, but there was no way to ensure participants would follow the guidelines, or follow them consistently. In some cases, participants provided only two – three words as a diary post; in other cases, participants provided 100 or more words. This inconsistency led to some participants' responses being featured more dominantly in the coding, theme development, and analysis. Given the nature of the study's design, there was no way to follow up with participants and seek clarification or further information without jeopardizing the integrity of the study. According to ESM (Zirkel et al., 2015), the participant entries had to be used as they were submitted.

The final limitation encountered in the study was the reliability with which participants responded at the end of each day. As noted in Chapter 4, there was tremendous variation in the reliability of participant submission of entries. In some cases, participants missed several days, while in other cases, participants missed 1 or no days. To mitigate the effect of this variation in reliability of diary submissions, participants that missed more than 2 days were dropped from the study. Even with the removal of three participants who had missed more than 2 days, the sample size remained at five, which was in line with the intended sample size of four—six and ensured trustworthiness of the data. Moreover, at no point did participants cite the inability to access technology as a reason for not posting a diary entry.

Recommendations

Because mature female students are a growing population in higher education, and because their needs as students are unique, there are many opportunities for continued research. The primary considerations of this study were stereotype threat and belonging in mature female students in higher education. Continuing this line of inquiry, an area for possible study with mature female students would be the presence of stereotype threat within academic programs and contexts not characteristically associated with this population. There are several studies that explore stereotype threat in minority populations within STEM courses and programs, and often these studies note the absence of belonging as a specific impact of stereotype threat in these contexts. However, few studies have explored the presence and impact of stereotype threat in mature women in specific contexts, including but not limited to STEM. A suggestion would be to conduct a mixed methods study to identify the presence and level of impact of stereotype threat and belonging within mature female students in STEM, as well as the nature of the impact. The results of the study could be compared with the results of this study to determine if context uniquely effects how mature female students experience role conflict and isolation due to age differences. Moreover, results from such a study could be used to deepen understanding of stereotype threat in this population, as well as shape interventions to decrease social isolation and increase retention of mature female students in STEM courses and programs.

The impact of navigating multiple roles on participants' health provides another area of possible study for this population. In this study, participants frequently referenced

mental and physical exhaustion, often in combination with physical illness. In many cases, the exhaustion and overwhelm occurred alongside struggles with time management. The presence of fatigue, especially as related to challenges in time management while negotiating life roles, could be explored in a phenomenological study. Such a study could deepen understanding of not only how these women manage life roles, but it could also provide indications of how these women might be able to better manage these roles and improve well-being.

In this study, participants frequently referenced the demands of coursework as occupying an inordinate amount of their time and energy. They described coursework as a pervasive presence in their daily routines, interrupting time designated for work, family, and friends, and even as a primary source of overwhelm. Future research could explore the relationship between coursework demands and specific life impacts on this population, such as health and wellbeing. Moreover, further research in this area could determine possible thresholds for establishing course work demands, especially in online environments, where students often work in isolation.

Beyond studies focusing on mature female students, additional qualitative research using ESM is needed. Although it is now well-established in quantitative research, there have been very few instances where ESM served as the primary methodology for a qualitative study. The use of ESM in this study indicates it may be useful for capturing lived experiences at the time or shortly after they occur, which can have numerous applications within many qualitative research designs. The methodology, however, also presented obstacles, such as variance in the quality and ultimately usability

of participant responses, as well as the reliability of participants meeting the required reporting intervals. These obstacles need to be addressed in multiple study designs before the viability of ESM for qualitative research can be determined.

Implications

As the mature female student population continues to grow in higher education, so too does the need to better serve the specific needs of this population through targeted services. Because research on the impact of stereotype threat and social belonging in mature female students is so limited, this study provides several opportunities for informed action on behalf of this population. First, the study indicated the need to assist this population with managing work-school-life balance. It is clear that mature female students struggle to navigate the many roles they inhabit, and programs designed to assist these students in better managing time and energy could yield gains in retention and, ultimately, graduation rates. Second, the study indicated that mature female students, primarily in the online modality, may struggle to effectively interact with classmates. This result may encourage institutions to explore programs that can bring mature female students into a greater sense of community and connection with classmates, perhaps through learning communities.

As indicated in the results of this study, mature female students often experience burnout and exhaustion, which may impact their persistence within academic programs. Students who are exhausted and overwhelmed by school and life responsibilities may not function effectively within the academic setting, specifically when engaging peers and completing coursework. This is of particular concern with this population, as this study

indicates that coursework disproportionately shaped how they viewed themselves as students. To some extent, the presence of coursework in so many responses indicated that participants saw themselves more as *doers* than *learners* or even *students* within the school context. This finding, perhaps more than any other, provides the greatest opportunity for social change. If faculty and staff could be trained to be more aware of this population's tendency to overwork themselves, they could intervene early and offer resources that may mitigate exhaustion and burnout.

Conclusion

All indications point to mature students growing as a population within higher education over the next several years, bringing with them distinct educational and life challenges (van Rhijn et al., 2016; Willans & Seary, 2011). As a subset of this population, mature female students (Newberry, 2013) present a range of unique needs and obstacles that will have to be addressed by the institutions that serve them. Among the obstacles faced by this population are several areas of stereotype threat, including use of technology, retention of skills, and performance in traditionally male centric fields, such as those found in science, technology, engineering, and math (STEM) (Gupta et al., 2014; Marchand & Taasoobshirazi, 2013). This study helped further define and add depth of understanding to two areas of stereotype threat identified but only partially addressed within the literature: role conflict and isolation due to age differences.

Of the two stereotype threats explored in this study, role conflict presented as the most impactful on participants. As they struggled to juggle multiple roles (e.g., mother, wife, caregiver, sibling, student, employee), participants admitted to feeling

overwhelmed, exhausted, and at times even physically and mentally unwell. Moreover, participants expressed concerns that others would perceive them as not fully meeting the expectations these various roles placed upon them, and these concerns often resulted in feelings of loss, guilt, and remorse. In the area of isolation due to age differences, or age-based stereotype threat, participants' responses indicated they felt separated from classmates and, at times, family members based on the perception that others could not understand the challenges they were facing, such as the increased demands school placed upon their already overloaded schedules. Participants also felt *othered* by classmates, as they attempted to be the mature and responsible member of project teams. Additional research into the specific impacts these stereotype threats have on mature female students is needed.

The results of this study expose an opportunity for institutions of higher education to meet the needs of this vulnerable population. By more deeply understanding the challenges mature female students face, institutions will be able to provide a more robust and more targeted set of interventions and resources to mitigate limiting beliefs about belonging and ability. In so doing, these institutions may impact the persistence of this population and, ultimately, the rate at which they achieve their ultimate goal of graduation.

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Appendix A: Participant Questionnaire

Q1
Age

- ○ 45 - 49
- ○ 50 - 54

Q2
Ethnicity

- ○ White
- ○ Black or African American
- ○ American Indian or Alaska Native
- ○ Asian
- ○ Native Hawaiian or Pacific Islander
- ○ Other

Q3
Family roles (check all that apply)

- ☐ Sibling
- ☐ Daughter of living parent(s)
- ☐ Caretaker
- ☐ Wife/partner
- ☐ Mother/guardian
- ☐ Grandmother

Q4
Previous education

- ☐ None
- ☐ Attended a two-year institution
- ☐ Graduated from a two-year institution
- ☐ Attended a four-year institution
- ☐ Graduated from a four-year institution
- ☐ Attended a trade school
- ☐ Graduated from a trade school

Appendix B: Daily Diary Entry Form

Today's Date

Q1

Describe how you spent your time today in and out of school. In your description, please include how well you felt you managed your time and met your obligations. Additionally, consider how your role as student may have come into conflict with other roles you play.

Q2

Describe your interactions with your professors, classmates, and school staff today, whether face-to-face or online. In your description, please include the types of interactions, the reasons for the interactions, and how the interactions made you feel.

Q3

Please feel free to add additional comments about your experiences today (optional).

Appendix C: Coding Form

Participant Reponses: Diary Entry 3			
DAY 1	Level 1 CODES	Level 2 CODES	MEMO
My plan this week is to get my chores out of the way because I will be attending a function on Friday and Saturday. I plan to dedicate the next three days to my studies. Midterms are out of the way, so this is week 5. I work better when the house is clean so I can concentrate on my studies.	Time management/scheduling Housework		LV
I am tired.	Fatigued/tired		Houston
DAY 2			
I feel bad that I forgot to make my journal entry in a timely manner but I did sign on as soon as I remembered and it is 3:05 a.m. and I am awake to let my dog out to use the bathroom.	Feeling guilty --poor time management		LV
My day is always overwhelmed but I always find time to study	Overwhelmed School commitment		Houston
Can't wait to get some sleep	Fatigued/tired		Wichita
DAY 3			
I truly enjoy classes. I feel that I am learning more each week and I learn more about myself as far as making time to do what I need done!	Enjoyment		LV
Another stressor this semester is my mom's health. She lives in Florida. 2 weeks ago she was rushed to the hospital from her nursing home. Since I live in KY it's hard for me. Her Parkinson's and dementia are increasing and it's hard to try to keep tabs on her health. Being in another state.	Health of parent Geographical separation from parent Concern about ability to give care		Cinci
I do not like these group projects	Dissatisfaction with school work		Wichita
I had interaction with classmates through the discussion by commenting on their work	Interaction with peers		Houston

Appendix D: Data Analysis Form

The numbers in the first row represent study day; the first column identified participant; subsequent columns contained codes; and the final column (not shown here) contained themes.

	1	2	3
NEW YORK	Job School --Coursework	Job School --Coursework	Job School --Coursework
LAS VEGAS	Housework Church/Faith School --Coursework Housework School --Coursework	School --Coursework School --Technology Time management Church/faith	School --Coursework Health --Physical Errands Mother Exhaustion --Physical
LOUISVILLE	Mother School --Coursework Job --Hours	No Entry	Job --Time off School --Coursework Time management School --Hours School --Coursework