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Mentoring and Academic Advising Experiences of Female Ph.D. Students with Children: A Qualitative Study

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MENTORING AND ACADEMIC ADVISING EXPERIENCES OF FEMALE PH.D. STUDENTS WITH CHILDREN: A QUALITATIVE STUDY

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Dissertation Abstract

Mentoring and Academic Advising Experiences of Female Ph.D. Students with Children: A Qualitative Study

Ph.D. student mothers often face challenges when balancing their academic obligations and family responsibilities. For students with children, there is a correlation between increased family obligations and decreased productivity (Brus, 2006; Maher, Ford, & Thompson, 2004; Lynch, 2008), but academic, social, and financial support can positively impact satisfaction and progress in the Ph.D. program. Faculty advisors play a crucial role in the Ph.D. experience and can positively or negatively impact a student's experience and productivity. The purpose of this study was to explore the academic advising and mentoring experiences of female Ph.D. students with children.

This qualitative study included ten participants from social science, science, and engineering degrees. Information was gathered through semi-structured interviews with female Ph.D. students with children ages ten and under. Questions explored the expectations students had of their faculty advisors, what academic advising and mentoring behaviors assisted students' ability to balance family and academia, and what academic advising and mentoring behaviors hindered students' ability to balance family and academia. Tronto's (1993) elements of an ethic of care guided emergent themes from the data analysis.

The study results indicated that students' expectations of their advisors change as they progress through the Ph.D. program. Expectations focused on financial support, communication, professional development, and recognition that students also have personal lives and responsibilities. Advising factors that impacted student experiences

included advisor fit, role conflict, and department culture. Interview responses indicated that the majority of student participants were satisfied with their advising relationship, but a few respondents did experience harmful behaviors. Students who were satisfied with their mentoring experience were more likely to have advisors that displayed all of Tronto's (1993) elements of an ethic of care.

The study concluded that faculty advisors play a significant role in Ph.D. student socialization, how students experience their Ph.D. program, and a student's academic and professional success. The data provided insight to the positive and negative impacts faculty advisors may have on the experiences of female Ph.D. students with children.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

Alyssa Ferree	May 2, 2018
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challenged and supported each other our entire lives. To Rory, thank you for your support and understanding throughout this process. To my children, I love you and I'm so proud of you!

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CHAPTER I

THE RESEARCH PROBLEM

Statement of the Problem

The advisor-advisee relationship is possibly one of the most important components of graduate education. Faculty advisors play a significant role in the Ph.D. student experience and degree completion or attrition (Barnes, Williams, & Archer, 2010; Fagen & Suedkamp Wells, 2004; Golde, 2005; Zhao, Golde, & McCormick, 2007). While advising and mentoring relationships can positively impact a student's academic experience and productivity, other factors in students' personal and family lives may be sources of stress or impact time to degree. For Ph.D. students with young children, there is a correlation between increased family obligations and decreased academic progress, especially among women and students of color (Brus, 2006; Maher, Ford, & Thompson, 2004; Lynch, 2008). There have been many studies on the importance of mentoring relationships (Paglis, Green, & Bauer, 2006; Tenenbaum & Gliner, 2001; Zhao, Golde, & McCormick, 2007) and a growing body of literature on the impact of parenting roles on the graduate student experience (Brus, 2006; Gardner, 2008; Lynch, 2008), but there is little information about how female Ph.D. students with children perceive faculty mentoring and academic advising behaviors.

A student's satisfaction with the mentoring relationship is affected by behaviors such as academic advising, personal interest and support, career development assistance, and whether the advisor is using the student as low cost labor (Zhao et al., 2007). These mentoring and academic advising behaviors may be especially important to students that are balancing family and coursework while trying to financially support their young

children. Students with additional employment and family obligations are likely to take longer to complete major milestones or finish their degree program (Maher et al., 2004) and can benefit from supportive faculty, networking opportunities, advisors that are knowledgeable about campus resources and degree requirements, and mentors that understand the work-family balance challenges faced by their advisees.

Graduate students with children can also benefit from the experiences of faculty advisors that have children. Women are earning doctoral degrees at higher rates, but those numbers are not carrying over to faculty hires. The underrepresentation of female faculty members means that female graduate students have fewer mentors and role models for successfully balancing academia and family. By addressing the challenges facing Ph.D. students, campus leaders can improve student success and completion rates, which will impact the pipeline to faculty positions and positions in industry.

Background and Need for the Study

For many students, the years spent in graduate school coincide with their ideal child bearing years (Kuperberg, 2009; Gardner, 2008). Women now enter graduate school at similar rates to men, but policies and campus culture have not caught up with current demographics. Policies and department cultures that prioritize the needs of single students do not effectively meet the needs of student families (Brown & Nichols, 2012; Kuperberg, 2009; Lynch, 2008; Springer, Parker, & Leviten-Reid, 2009). Socialization, advising, support networks, and campus culture can positively or negatively impact a student's experience and success in graduate school (Gardner, 2006). Faculty advisors are in the position to impact the experiences of graduate students with children.

Some universities do provide a parental leave program and family services for graduate students, but that can range from institutions that only offer an unpaid extension for milestones to institutions that provide full funding, milestone extensions, affordable child care options, lactation spaces, and on-campus family housing (Sallee, Dawson Zare, & Lester, 2009, Mason, Wolfinger, & Goulden, 2013). At many colleges and universities, departments make accommodations on an individual basis (Springer et al., 2009). Even at institutions with campus-wide policies, departmental culture and policy implementation may be more influential on the student's perceived level of support, a student's awareness of support services, and the student's willingness to make their family life visible to their advisor and cohort. At the doctoral level, students closely affiliate to their home department, and department culture has a significant impact on the student's graduate experience (Golde, 2005).

In departments with a culture of institutional ownership, graduate students are expected to be available to their advisor at all times. This is a challenge for student parents as they balance classes, their research, advising meetings, and family obligations (Brus, 2006). Students worry that their parental role will cause their faculty and peers to view them as less dedicated to research, so some students try to separate and hide their parental role (Espinoza, 2010; Lynch, 2008). Students with available support resources and understanding advisors are more confident in their ability to manage both their student and parent roles.

Gardner (2008) found that unsuccessful socialization is a contributing factor to a student's decision to leave graduate school. For students with children, they may choose to conduct research in the evenings, or when their children are at school. They may not

be able to make all of the social activities with their cohort if families are not invited to department function or if events conflict with family obligations.

Students attempting to hide their parental role from their advisors and peers are under additional stress as they attempt to silently negotiate their work-life balance. Female students attempting this "maternal invisibility" are often in environments where they assume they will not be taken seriously as an academic if they discuss their family (Lynch, 2008). It is unfortunate that students feel the need to hide a major part of their life, especially when research shows that the number of students with children is increasing. Graduate student demographics are changing, with women entering doctoral programs in equal numbers to men (Mason et al., 2013; Nettles & Millett, 2006). Doctoral students are also older than prior generations (Mason, et al., 2013), with doctoral education careers overlapping with prime child-bearing years. Faculty and campus leaders need to identify ways to improve the experience of students that do not fit the traditional student demographic.

Purpose of the Study

The purpose of this study was to explore the academic advising and mentoring experiences of female Ph.D. students with children. Female Ph.D. students with children were interviewed about the academic advising and mentoring relationships, satisfaction with advisor interactions, and if academic advising and mentoring practices and behaviors alleviate or contribute to work-family balance challenges. Productive advising and mentoring relationships are associated with successful graduate student socialization and a positive graduate school experience (Golde, 2005; Lovitts, 2001). Prior studies have found that increased family obligations can contribute to decreased academic

progress or attrition (Brus, 2006; Maher et al., 2004; Lynch 2008). This study contributes to our understanding of the experiences of female Ph.D. students with children and how academic advising and mentoring relationships may or may not mitigate some of the stress associated with balancing research and family. Doctoral student experiences are tied to degree completion rates and the academic pipeline. Ph.D. students are future academic and industry leaders, so an understanding of how Ph.D. mothers experience graduate school may provide insight to the academic and career pipelines.

Prior studies have discussed the changing demographics of doctoral education as students are older, married, and have children. Garder (2009) discussed the need for more research around concerns and obstacles in the doctoral process. The Survey of Earned Doctorates (National Science Foundation, 2015) shows that nearly 60 percent of doctoral recipients are married, which some researchers presume to demonstrate an increase in the number of students with children or planning to start families. Prior studies have also focused on work-family issues for faculty, with less research looking at the experiences of doctoral students (Mason et al., 2013).

Research Questions

The study is guided by the following research questions:

1. What expectations do female Ph.D. students with children have of their faculty advisors?
2. What academic advising behaviors and practices assist or hinder female Ph.D. students in balancing family and academic obligations?
3. What mentoring behaviors and practices assist or hinder female Ph.D. students in balancing family and academic obligations?

Theoretical Framework

Ethic of Care

Lawrence Kohlberg's theory of moral development was developed in the late 1950s and popularized by the 1970s. Kohlberg's theory proposes that moral reasoning has six developmental stages that individuals use to respond to moral dilemmas and make ethical decisions. Individuals progress through the stages as they gain competence in moral reasoning and balancing conflicting social-value scenarios. Kohlberg's theory is based on an ethic of justice, built on concepts of reciprocity and fairness (Larrabee, 1993).

Carol Gilligan critiqued Kohlberg's work for gender bias as all of Kohlberg's subjects were male and did not reflect the experiences of women. Gilligan went on to publish her own theory of moral development, based on an ethic of care. Gilligan argued that women's perspectives are not represented in psychological, philosophical, and moral reasoning theories (Wood, 1994). Gilligan claimed that an ethic of justice is not the only mature moral orientation and that an orientation of care, with an emphasis on concern and connection to others, could also drive moral decision-making. (Larrabee, 1993). She identifies women's perspective as the care perspective, with a focus on caring and relationships. Kohlberg's theory reflected societies emphasis on individual achievements and the "self-made man", while Gilligan drew attention to the importance of caretakers and how that work was devalued in society and in Kohlberg's theory (Brabeck, 1983).

Gilligan (1977) describes an ethic of care as having three levels and two transition periods. The first level is "Orientation to Individual Survival." In this level, protecting the self is the primary goal. Moral decisions are based on the impact and survival of

oneself; the individual struggles with the difference between wants and needs. The first transition is the move "From Selfishness to Responsibility". In this transition, the definition of self is connected to the attachments to others. Responsibility to others impacts decisions of what one would do versus what they should do. The second level is "Goodness as Self-Sacrifice." In this stage, concern for others and avoiding harm is a paramount importance. "Goodness" is a reflection of conventional values of self-sacrifice and the role of women as caretakers. The second transition is the move "From Goodness to Truth." In this transition, a woman "strives to encompass the needs of both self and others, to be responsible to others and thus be 'good' but also be responsible to herself and thus be 'honest' and 'real" (Gilligan, 1977, p. 500). Women realize the need to balance care of themselves with care of others. The third level is "The Morality of Nonviolence." In this final stage, the struggle between care of self and selfishness is resolved. Nonviolence is the used as the basis for decision-making, as dilemmas are resolved by decisions to avoid causing harm to self or others.

Feminists had mixed reactions to Gilligan's theory. Some saw Gilligan's work as providing meaning and value to "feminine morality"; others were alarmed by the suggestion of gender differences and biological determinism (Larrabee, 1993). Gilligan (1986) has emphasized that her work describes "a different voice," not "a woman's voice" (p. 207). But her research study only included women and how they made decisions about abortion. Gilligan does note that this "different voice" can also apply to men, but she also claims that her ethic of care was representative of women's moral decision making.

Some researchers have critiqued Gilligan's work for reflecting the experiences of privileged white women and not examining the experiences of marginalized groups or how care is situated historically (Larrabee, 1993; Stack, 1986; Tronto, 1993; Wood, 1994). Other studies have found little difference in moral development between men and women in poor communities and communities of color. This evidence points to a need to further explore the intersections of gender, race, class, and culture and how these experiences impact moral decision-making.

Noddings (1984; 1992) expanded Gilligan's work to the field of education. Noddings' ethic of care is based on the relationship between the teacher's role as the "one-caring" and the student's role as the "cared-for." Noddings believed that caring should be at the foundation of the education system. The emphasis of Nodding's ethic of care is on the care and connection teachers feel in their interactions with students and in decision-making. The "one-caring" feels obligated to care for the "cared-for", approaching the relationship as a duty and with a commitment to support their students. "One-caring" teachers meet their students where they are and acknowledge students' feelings and needs as the teacher strives to understand the student's goals and motivation. (Noddings, 1984). For the ethic of care to develop, the "cared-for" student must be receptive to a caring relationship from the teacher. Noddings proposed that students will be receptive and responsive to the teacher if they believe the teacher truly values their feelings. Noddings' ethic if care is most frequently applied to one-to-one caring relationships in K-12 education rather than higher education settings.

Tronto (1987; 1993) proposed shifting the focus away from "women's morality" and instead focusing on how an ethic of care represented perspectives and values that

resonate with the experiences of women. Tronto argued that to make the ethic of care a meaningful moral theory, it needed to expand beyond just a difference between sexes and scholars must examine how class, racial, ethnic, and societal differences impact morality. Tronto and Fisher (1990) sought to broaden the ethic of care to include private and public roles, integrate multiple roles, and to address how caring perpetuates the oppression of women. Tronto and Fisher also noted that caring is not only a social or moral act, but also a political act that permeates all aspects of an individual's life. Tronto and Fisher define care as "a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web" (1990, p. 40). To Tronto (1993), caring varies by culture, is ongoing, is not restricted to human interactions (caring occurs for object and the environment), and caring is not only dyadic or individualistic.

Tronto and Fischer (1990) identified four phases of caring: caring about, taking care of, caregiving, and care-receiving. Each phase is a precondition for the following phase, but the phases may experience conflict or intertwine as the individuals involved in the caring relationship approach the situation with different backgrounds, perspectives, and expectations. An individual (or multiple people) must care about in order for another individual (or multiple people) to be taken care of. But during the caring process, the care giver and care receiver might disagree on how care is given, the care giver might not have the time or knowledge to provide adequate care, or the caregiver may need to receive care in another aspect of their life.

The "caring about" phase of the caring relationship involves recognizing that care is required. What is cared about varies by individual and is shaped by cultural and individual experiences. It is assumed that people have some knowledge and connection with things or people they care about. Resources such as time, funding, knowledge, and skills impact caring priorities. We cannot always respond to everything we care about. The "taking care of" phase requires taking responsibility for responding to an identified need. This phase requires some knowledge and dedicated time to address the caring needs, find or provide the necessary resources (time, money, skills), and make decisions regarding care. "Caregiving" is the direct work of meeting the care-receiver's needs and usually requires a larger commitment than "taking care of." The "care-receiving" phase is how the individual (or group) receiving care responds to the caregiver and the care provided.

Tronto and Fisher (1990) highlight the flaw of using white middle-class femininity standards to define female morality and caring.

> "By stressing women's emotional and moral superiority, the middle-class ideal of femininity made caring about an ideal by which to judge all women. Women who lack the time knowledge, skills, or resources to meet the white, middle-class standard of feminine caring about are often seen as defective in their femininity. Moreover, women, in general, are often pressed to care about more than they can manage, and are criticized for not caring enough. Such failure becomes a failure in achieving a basic gender identity, a failure at being womanly, motherly, or nurturant." (p. 36)

From the four phases of care, Tronto (1993) identified four elements of an ethic of care: attentiveness, responsibility, competence, and responsiveness. Attentiveness refers to recognizing the needs of others. In an ethic of care, caregivers are expected to recognize consequences and the impact of their actions on others. It may not always be possible to foresee distant consequences, but inattentiveness to others is a challenge to moral-decision making. Tronto draws attention to the importance of being attentive to one's own need for care prior to being able to recognize other's needs. If one's needs are not met, they will not be able to effectively notice or care for others. "Responsibility has different meanings depending on one's perceived gender roles, and issues that arise out of class, family status, and culture, including cultural differences based on racial groupings" (Tronto, 1993, p. 133). There is no single definition for responsibility in an ethic of care, but responsibility to care may be impacted by something the caregiver did or did not do which lead to the need for care. Tronto uses the example of becoming a parent as a cause for responsibility of caring for those children. Competence in care helps ensure that caring needs are actually met. "Intending to provide care, even accepting responsibility for it, but then failing to provide good care, means that in the end the need for care is not met" (Tronto, 1993, p. 133). Deciding to take care of a problem without providing the necessary resources, time, skill, or energy is not adequately providing care. Responsiveness in care describes the ability to understand and respond to the care-receiver's position as they describe it. The caregiver understands the problem by being attentive to the care-receiver's expression of the situation rather than putting themselves in the other person's position. People experience situations differently; a

responsive caregiver cannot assume the care-receiver would have identical experiences, needs, or reactions.

Ethic of care as described by Tronto was used in this study because Tronto's model takes into account the diverse range of experiences and background that individuals bring to a caring relationship. Ph.D. students and their advisors may approach situations from very different perspectives, and Tronto's model examines how effectively a caregiver (advisors in this study) recognizes the need for care, takes responsibility, is competent in providing care, and responsive to the experiences of the care-receiver (Ph.D. students in this study). Tronto's model recognizes that care does not occur in a vacuum and external factors impact an individual's ability to effectively provide care.

Limitations/Delimitations

The study was conducted at the university where the researcher was currently employed, which may create bias. The study was conducted at one university and may not represent the experiences of doctoral students at other universities. The student participants may have filtered their responses to protect their advising relationship, as this is a sensitive topic in a relationship where advisors have influence and control over their advisee's academic and career success. The study did not address factors such as age, ethnicity, or socioeconomic status, which can have an impact on a Ph.D. student's advising experience. The focus was on doctoral students and may not reflect the experiences of other graduate students in master's degree programs and professional degree programs. This was a qualitative study with ten participants, so the study is limited in terms of the sample size and the results cannot be generalized to other

universities. Ph.D. students with children are balancing multiple roles and obligations, which may have hindered the response rate in the call for participants. The interviewee's multiple roles also factored into their availability as many respondents commented that they did not have time for an hour-long interview. Another limitation is that the study focuses on doctoral student mothers with children in elementary school or younger. The experiences of mothers with older children and of male Ph.D. students with children were not be included in this study.

Significance

This research adds to the body of knowledge on graduate student mentoring and advising by providing insights to the experiences and expectations of graduate students with young children. This is a growing demographic and this study will contribute to our understanding of how academic advising and mentoring may or may not mitigate some of the stress associated with balancing research and family. There is little information about the mentoring and academic advising experiences specific to Ph.D. students with children. Prior research on graduate student academic advising and mentoring has focused on best practices, differences between disciplines, and how mentoring and advising affect attrition or persistence.

Information gathered from this study can inform best practices for graduate student advising and mentoring and might contribute to graduate student programming on the university campus. This study may also contribute to our understanding of the faculty pipeline as graduate school is one of the key attrition points on the way to tenure track faculty careers. Prior research has examined how motherhood impacts tenure track faculty; this study may provide additional insight on how motherhood affects future

faculty and future academic leaders at earlier stages in their academic career. This research may also be of relevance to students in dual-career or dual-student relationships as the experiences and persistence of female Ph.D. students also affects their partners and families.

Definition of Terms

The following definitions were used in this research:

Academic advising practices: refers to formal behaviors and actions an advisor performs while working with his or her doctoral student advisees, including approving coursework and academic requirements, signing official paperwork, and finding a dissertation committee (Barnes & Austin, 2009).

Care: "a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web." (Tronto, 1993).

Degree milestones: "the research doctoral program in the United States generally consists of three major components: coursework, examination/assessment of skills gained through coursework, and the production of independent research, often referred to as the thesis or dissertation" (Gardner, 2009, p. 30).

Doctoral advisor: faculty member who "provides doctoral student with continuous feedback, both formal and informal" (Council of Graduate Schools, 2005, p. 9). Students may also refer to their advisor as an academic advisor, committee chair, dissertation advisor, or dissertation chair.

Graduate persistence: the retention of a graduate student so they may successfully complete "at least three distinct stages, namely that of transition and adjustment, that of attaining candidacy or what might be referred to as the development of competence, and that of completing the research project leading to the awarding of the doctoral degree" (Tinto, 1993, p. 235).

Mentoring: one-to-one process where an experienced individual contributes their knowledge and expertise to guide their mentee towards their intended objective (Cohen & Galbraith (1995). "It is a type of interpersonal relationship that changes over time and includes the intentional process of nurturing, support, protection, guidance, instruction, and challenge" (Williams-Nickelson, 2009).

Mentoring practices: refers to behaviors and actions a faculty member performs while guiding a doctoral student's professional development by "giving them a role model, setting standards, and helping them to …fulfill their potential" (Barnes & Austin, 2009, p. 309).

Socialization: "the process through which an individual learns to adopt the values, skills, attitudes, norms, and knowledge needed for membership in a given society, group, or organization" (Gardner, 2008, p. 126).

Summary

Prior research highlights the importance of faculty members in the Ph.D. student experience, as academic advisors, mentors, and as key contributors to graduate student socialization. Ph.D. programs typically overlap with key childbearing years, so it is important to consider how female Ph.D. students with children are experiencing and perceiving their academic advising and mentoring relationships. While there are prior

studies about mentoring and academic advising relationships, and increasing knowledge about the experience of graduate students with children, there is unfortunately little information about how female Ph.D. students with children experience academic advising and mentoring. The purpose of this study is to fill the gap in the literature about this topic.

Chapter II provides an overview of the literature describing gender in higher education, including the "leaky pipeline" and work-life balance, graduate student socialization, graduate student attrition and persistence, and finally Ph.D. academic advising and mentoring.

Chapter III describes the interview protocol and research conducted as part of this study. Female Ph.D. students with children were interviewed to explore and understand their advising and mentorship experiences.

Chapter IV uses the findings from the student interviews to answer the three research questions. Emergent themes are highlighted to explore the experiences of female Ph.D. students with children.

Chapter V provides discussion on how Tronto's (1993) ethic of care connected or did not connect with the Ph.D. students' experiences. Implications and future recommendations are discussed.

CHAPTER II

REVIEW OF THE LITERATURE

Restatement of the Problem

Graduate student mothers often face challenges with balancing family obligations with their doctoral degree program. Increased family responsibilities may correlate to decreased productivity, but academic, psychosocial, and financial support can positively impact productivity and satisfaction in the Ph.D. program. To provide context and background information about this study, the review of the literature examines work-life balance for graduate student mothers, the graduate student socialization process, factors contributing to attrition and retention, and academic advising and mentoring practices. These topics inform the research questions for this study regarding expectations Ph.D. mothers have of their advisors, what academic advising and mentoring practices assist Ph.D. mothers in balancing family and academic obligations, and what academic advising and mentoring practices contribute to student stress around balancing family and academic obligations.

Gender in Higher Education

The "leaky pipeline"

There has been a dramatic increase in the number of female graduate students over the last four decades. Women represented less than 10% of doctoral recipients in 1970 and 51% of doctoral recipients in 2014 (U.S. Department of Education, 2015). Traditionally, women were advised to put off having children until they completed their Ph.D. and gained tenure, so they could fully focus on their research and education (Armenti, 2004; Tierney & Bensimon, 1996). The number of female tenure-track faculty

has not kept up with the growth in the number of female doctoral recipients (Wolfinger, et al., 2008). Researchers describe the problem as a "leaky pipeline", as women are more likely to drop out of the career path pipeline than their male peers, with motherhood being a contributing factor to "leaks" (Mason & Goulden, 2002; Wolfinger, Mason, & Goulden, 2008).

One significant obstacle in combining motherhood and academia is the overlap between prime childbearing years and average age of Ph.D. students and junior faculty (Hewlett, 2002; Ward & Wolf-Wendel, 2012). In contrast, men in academia are more likely than men in other professions to have children and be married (Hewlett, 2002). The median age for female doctoral recipients is 34 (AAUP, 2001), which is around the same age that fertility starts to decline (Hewlett, 2002). Female Ph.D. candidates and recipients try to determine the best time to start a family – while completing the Ph.D., as a new faculty member working towards tenure, or after receiving tenure. In 2001, the American Association of University Professors addressed the work-family conflict faced by female faculty by recommending that up to two years be added to the tenure clock for new parents. Some female faculty attempt to time pregnancy around the summer months if they had not yet reached tenure (Armenti, 2004). Others have chosen to delay starting a family while they worked towards career milestones (Wolfinger, et al., 2008). Even with family-leave policies in place, there is a fear from female faculty that they will be penalized in the tenure process. By choosing to postpone childbearing until after completing a Ph.D. or receiving tenure, some women find that it is too late for them to start a family. Mason and Goulden (2004) found that 38% of tenure track female faculty had fewer children than they hoped for. Academic mothers report that they are the

primary caregiver at home (Ward & Wolf-Wendel, 2004; Crittenden, 2002), even in dual-career households. Women at earlier stages in their academic career may choose other, more family-friendly career options (van Anders, 2004).

Women choose to leave the academic career pipeline at three key points: during their Ph.D. program, after completing their degree but before entering the faculty job market, or after starting a tenure-track position but before reaching tenure (Morrison, Rudd, & Nerad, 2011; Wolfinger et al., 2008). Mason and Goulden (2002) studied the "early baby phenomenon", where women who became mothers during their Ph.D. program were less likely to become tenure track faculty. They used data from the Survey of Earned Doctoral Recipients, 30,000 tenure track faculty members. Their study found that Ph.D. mothers were more likely to obtain adjunct or lecturer positions, while Ph.D. fathers were represented in tenure-track position at higher rates than mothers and single men. Mentoring, funding challenges, lack of institutional support for families, and challenges of work-family balance are all contributing factors to the leak.

Mason et al. (2013) found that female students were more likely than male students to put off having children and were also more likely to fear that they would be taken less seriously in their graduate program and research if they were pregnant or had children. Finances and available time are also contributing factors for delaying having children, but academic culture around parenting and gender bias were the predominant factors. Female students in STEM fields reported less flexibility and more perceived bias than female students in the humanities and social sciences. Kurtz-Costes, Andrews Helmke, and Ülkü-Steiner (2006) interviewed twenty Ph.D. students and found that female Ph.D. students were more likely than male Ph.D. students to report consciously

postponing involvement in a serious relationship while in graduate school. Pregnancy and parenthood were described as a source of stress. Several participants (male and female) stated that their faculty advisor tried to appear supportive, but it was clear that the advisor did not believe having children during a Ph.D. program was a good idea. In contrast, several other students reported that their advisor and department were very accommodating and supportive, which helped alleviate stress caused by balancing academics and a family.

Work-family balance

The average age of graduate students has increased in recent years, as has the number of married students (Gardner, 2009; Brus, 2006; Golde & Dore, 2004). According to Brus (2006) and Lynch (2008), higher education and doctoral programs are primarily designed for single, male students, and often do not take into account the financial and personal needs of students with children. Researchers have found that an increase in family obligations is associated with decreased academic success (Brus, 2006; Curtis, 2004). This is especially evident for female students and students of color (Wagner, 2002). Prior studies have also found that women have higher attrition rates then their male counterparts (Golde, 1998). While these previous studies have not studied how advising specifically impacts attrition rates for student parents, these studies draw attention to areas where higher education institutions may be failing to meet the needs of this demographic. If women are leaving at higher rates, and family obligations are tied to decreased productivity, what are institutions, departments, and faculty advisors doing to support and retain student parents? Tinto (1993) proposes that conflicting

demands from academic departments, family, and work, may force students to give up membership in one of those communities.

Student parents must balance their time commitments to fit the heavy demands of parenthood and academia. This may mean writing or conducting research late at night (Gardner, 2008), struggling to find affordable childcare (Lynch, 2008), changing research topics (Masi de Casanova et al., 2013), switching to part time status, or hiding their parenting status from their advisor or peers (Lynch, 2008). The reality of balancing family obligations with a doctoral program means that student parents are constantly weighing their options in an effort to create the least impact on their family and graduate career. This could include staying home with a sick child, bringing a child to the office, running back and forth between campus and family obligations, missing out on important lab meetings, or missing out on family activities. Every choice has a consequence. Decision-making is not unique to student parents, but the continuous burden of making these choices and trying to succeed in both realms can take a toll over time (Brus, 2006). For students that do not have support from their advisor or feel that they must hide their parenting status from their research group, this balancing act is especially taxing.

Structural barriers including lack of maternity leave policies, inadequate childcare options, insufficient financial support, inadequate health care, class scheduling, and lack of breastfeeding facilities can impact how Ph.D. mothers balance family and academia (Brown & Nichols, 2012). Springer et al. (2009) surveyed graduate directors of the top 63 sociology departments in the United States, and found that most institutions are lacking sufficient policies and institutional support for pregnant and parenting graduate students. The study indicated that most departments were handing situations on a case-

by-case basis. If student mothers do not have financial and structural support from their institution and department, their ability to succeed in the academic environment is negatively impacted.

Brus (2006) draws attention to the culture of institutional ownership that is present in many doctoral programs. This describes the expectation that students are available to their faculty advisors and mentors at all times, with little complaints. This is an unspoken expectation in many academic departments, carrying over from a time when most graduate students were white men from wealthy families, without the day-to-day responsibilities of raising a family. These expectations are typically communicated through faculty advisors. Institutional ownerships still exists to some degree, with the expectation that the most dedicated students will work 60 to 80 hours a week in the lab or office and are available to their advisor on short notice. These measure of success shun students with family obligations, and sends the message that they cannot succeed in their doctoral program.

Lynch (2008) and Estes (2011) describe the challenges mothers face with responding to society's ideals of being a "good mother" and a "good student". Lynch (2008) described the phenomenon as "maternal invisibility". Students may downplay their maternal role while participating in their academic role, while also downplaying their student role when they are away from academia. By separating their two identities, these parents attempt to meet cultural norms of being both a good mother and an academic (Espinoza, 2010; Estes, 2011). Students may choose not to discuss their families or keep photographs in their office. In their family role, they may volunteer at their child's school, play groups, and appear as a stay-at-home mom. This technique

causes challenges for institutions because they cannot respond to the needs of student parents if students are trying to hide their parent role (Lynch, 2008). Some students interviewed by Gardner (2008) discussed how they try to balance their academic and family expectations by working at night, which can be very isolating, or by changing their research area or methods for more flexibility with their family obligations. Mason et al. (2013) discuss the outdated model of the ideal graduate student worker. The current generation of students looks for flexibility to match their values and life goals, but academic culture still models the prior generation and senior faculty, who are predominately male and more likely to be single-income families. Some mothers choose to integrate their multiple roles. These integrators share their academic experience with family members, with open communication about the challenges and demands. They are also likely to share information about their family and personal concerns with faculty advisors (Espinoza, 2010).

Graduate Student Socialization

Socialization is the ongoing process where a graduate student learns the norms, values, knowledge, and expectations required to enter their intended profession and department (Gardner, 2008; Golde, 1998; Lovitts, 2001; Weidman et al., 2001; Austin, 2002; Tinto, 1993; Delmont, Atkinson, & Parry, 2000). Doctoral students interact with and observe faculty and peers from the time they enter their doctoral program through graduation. They are simultaneously socialized to their discipline, their graduate student role, and life as an academic and potentially a future faculty member. They take cues from faculty and peers throughout their graduate program. Graduate programs tend to be decentralized at most institutions, with support, finances, and social interaction occurring

at a department level, not a university level. Through this design, socialization for doctoral students is closely related to academic integration (Tinto, 1993).

The socialization process varies by discipline and department, with faculty advisors playing a key role in the socialization experience (Austin, 2002; Golde, 2000; Sallee, 2011; Weidman & Stein, 2003; Weidman, Twale, & Stein, 2001). Through socialization, graduate students are introduced to both their intended profession and their position as a graduate student. Students must adopt the intellectual skills necessary to succeed in their field, as well as the norms and practices to integrate into their department's culture (Golde, 1998). The advising experience plays an important role in the socialization process as advisors guide students to not only learn about their research topic, but also how to do the research and how to be a successful member of the discipline (Delamont et al., 2000). This involves meeting expected norms and standards in the field, academically and socially.

Austin and McDaniels (2006) identified four categories of competencies that Ph.D. students should develop: conceptual understandings, knowledge and skills in key areas of faculty work, interpersonal skills, and professional habits and attitudes. Delamont et al. (2000) find that doctoral students believe that they are dependent on senior members of their departments, as they are not equals in experience and knowledge. The authors also point out that social science fields are more likely to incorporate personal relationships in the socialization process, rather than the positional relationships that are more common in the sciences. Ph.D. students in the sciences have specific roles and positions in their research group, with clear expectations. This can make it more challenging for students that are outside the norm, including students with children. For

Ph.D. students in the social sciences, they may be more isolated without a research group, which may make their socialization and requirements unclear, not easier. The socialization process must learn the traditions of their disciplines, while also negotiating the specific everyday practices and requirements imposed by their advisor. As a new member of the discipline and department, they are dependent on adapting to the "hidden curriculum" (Delamont et al., 2000, p. 10) of their research group and department.

Unfortunately, Ph.D. students are often progressing through their programs without intentional and structured socialization (Austin & McDaniels, 2006; Golde & Dore, 2001). Several researchers have suggested that advisors and advising/mentoring behaviors are key to improving the doctoral student experience and Ph.D. student socialization (Austin, 2002; Austin & McDaniels, 2006; Golde, 2005).

Weidman et al. (2001) propose four stages of socialization – anticipatory, formal, informal, and personal. In the anticipatory stage, students become familiar with their academic discipline and expectations for their field. As the student becomes more familiar with their program and research field, preconceived notions about graduate life may change. In the formal stage, students receive formal training through courses and research. In the informal stage, students learn about informal or unspoken role expectations, department culture, and networks. In the personal stage, students internalize their role and develop a professional identity where they are a scholar, not a student. According to Weidman et al. (2001), the three key elements to graduate student socialization are 1) knowledge acquisition, 2) investment to the profession, and 3) involvement, including interacting with experts and well established professionals in the field.

Golde (1998) describes graduate student socialization through four transition tasks. The first task is intellectual mastery. Students ask themselves "Can I do this?" as they gain intellectual competency through courses and research. In the second task, students ask themselves "Do I want to be a graduate student?" as they learn about the realities of being a graduate student. Through the third task, students decide "Do I want to do this work?" while deciding if the discipline and graduate program is a good fit. The fourth task is to integrate into the department and build relationships with peers and other scholars. Students in this task are asking "Do I belong here?"

Socialization may begin before a Ph.D. student even starts their graduate program (Sallee, 2011). Students begin learning about graduate school and Ph.D. student lifestyles through interactions with their professors and graduate student teaching assistants during their undergraduate career.

Faculty advisors play an important role in graduate student socialization, as they provide students with the training and skills necessary for their academic discipline and department culture. Faculty members are crucial participants for all three of Weidman et al.'s (2001) elements to socialization. Faculty establish the norms for teaching and research, set expectations, assist students in networking and "learning the ropes" for their field, and serve as gatekeepers or networkers for students seeking involvement in their discipline. In Weidman et al.'s (2001) informal stage and Golde's (1998) fourth task, students are determining if their experiences, priorities, personal life, and professional interests are a good match with department culture and expectations. Students are taking cues from their advisors and colleagues to determine the informal expectations and norms with in their Ph.D. program. Advisor interactions can influence a student's

understanding of their role within the department and if they are a good fit for the department and discipline. For graduate students with children, advisors can send a strong message about how a student's parental identity fits with department culture.

Golde's (2000) study suggested that Ph.D. student socialization and successful academic integration is shaped by interactions with faculty advisors. Students with positive advising relationships were more likely to complete their Ph.D. program, while negative advising relationships contributed to the decision to leave the Ph.D. program prior to completion. In Gardner's (2010) interviews with sixteen doctoral faculty members about graduate student socialization, faculty members were more likely to discuss their role in the formal socialization activities (academic guidance and participation in professional conferences) and less likely to discuss informal socialization activities (interpersonal development, peer socialization). Faculty participants in Gardner's (2010) study credited external participants (e.g. seminar speakers, conference attendance) with their student's socialization, and did not seem to be aware of how important faculty members are for student socialization. It is possible that faculty participants view their primary role as an academic advisor, not mentor, or that faculty have not been included in socialization conversations on campuses and do not use socialization language to describe their advising or mentoring practices.

Advanced graduate students also play an important role in the socialization process. Weidman and Stein (2003) surveyed 50 Ph.D. students in two departments and found that students were more likely to have social and academic conversations with their peers than with faculty members. White and Nonnamaker's (2008) Doctoral Student Communities of Influence Model describes the important academic and social

communities that shape the Ph.D. student experience. The five influential communities are 1) their discipline or sub discipline, 2) the institution, 3) the academic department, 4) their research or lab group, and 5) the community formed through advising relationships. Student peers were discussed as important members of the academic department, research group, and advising group. The faculty advisor is typically the leader of the lab or research group, and responsible for setting the tone and guiding the development and direction of that group of students (White & Nonnamaker, 2008). So while peer socialization is a key component of socialization and community building, these department and research communities are also tied to faculty support.

Gender and graduate student socialization

Clark and Corcoran (1986) found differences in how men and women were socialized to academic environments. Women in Clark and Corcoran's study reported isolation, hostility, and minimal support from their faculty advisors, especially in male dominated disciplines. Sallee's 2011 study found similar socialization differences 25 years after Clark and Corcoran's study. In Sallee's (2011) research about male graduate students in an engineering department, student respondents discussed the objectification of female faculty and graduate students, hierarchy in the department, and male competition. If Ph.D. student socialization is gendered, it can be a barrier to successful integration for female graduate students (Sallee, 2011). Gardner (2008) found that graduate student mothers experienced isolation because they did not fit the typical graduate student mold. In a study of 40 history and chemistry students, Gardner (2008) reported that graduate student mothers described their student experience as different and "out of the norm" as they didn't fit the model of the typical graduate student. These

feelings of isolation and not fitting the mold contributed to decreased satisfaction with their graduate school experience and less integration to the department community.

Gardner (2008) notes that little research has been done on the socialization experiences of underrepresented groups, but prior research does show that demographic characteristics, including family status, influence the graduate student experience and persistence rates. Academic culture and graduate student socialization typically reflect the experiences of White men, given the history of higher education being male-dominated (Gardner, 2008). An advisor's socialization methods may not work for all of their doctoral advisees. Gardner's study also found that the socialization process affected student's attrition or retention.

Ph.D. students of color report isolation and self-doubt in hostile and unwelcoming environments, and difficulty connecting with advisors and peers who do not understand or show interest in their experiences or contributions (Gildersleeve, Croom, & Vazquez, 2011; González, 2006; Solórzano, 1998). Norms and practices in predominantly White institutions and disciplines are generally not inclusive of students of color, so the socialization experience may push doctoral students of color further away from their goal of attaining a Ph.D.

Students that fall outside of the norm, including students with children, are more likely to face barriers to socialization (Gardner, 2008a). For student parents, schedules and family responsibilities may not fit with the schedules and expectations of their faculty advisors and academic departments. Similar barriers are discussed in the literature regarding female faculty with children (Ward & Wolf-Wendel, 2004). When a student does not successfully integrate to the department's norms and values, they are more likely

to remove themselves from the program or face isolation from their research group (Lovitts, 2001). Lovitts (2001) does clarify that successful integration is not required for completing a doctoral program, and is not a reflection of the student's intentions and motivation to attend graduate school, but students who do not integrate may be unhappy in their chosen program. They may also be viewed by their advisor or peers as bring less committed or not the right fit for the department or discipline (Lovitts, 2001; Nettles & Millett, 2006). Students who have children early in their Ph.D. program may have fewer opportunities and less time to obtain crucial career related experiences and resources, which impacts their ability to succeed in graduate school and their future careers (Kuperberg, 2009; Lynch, 2008).

Interaction with student peers is also a significant piece of the socialization process (Nettles & Millett, 2006; Weidman et al., 2001). Peers help new students adjust to the expectations and culture of the department and research group through formal and informal socialization activities. Students with children may have weaker relationships with their peers (Nettles & Millett, 2006). Faculty advisors' expectations and behaviors help set the tone for their research group, which trickles down to the information and norms graduate students are sharing with new members of their groups.

Care and Socialization

Noddings (1984) is the model most frequently referenced in the literature regarding caring in education, but that literature is also typically focused on teacher education for the K-12 level. There are differences between the teacher-student relationship and the faculty advisor-Ph.D. student relationship, but in both of these pairings the teacher/advisor is in a position of power, authority, and expertise. The

teacher and Ph.D. advisor both have responsibilities to educate and train their students. Noddings (1984) discussed the obligation and commitment teachers feel towards toward their students and the care and compassion teachers demonstrate in a caring relationship. That same type of care, support, and compassion can occur in faculty-student advising or mentoring relationships. Everyone requires care, no matter their age, career stage, or education level.

Noddings' (1984) "one-caring" and "cared-for" roles can also be applied to supportive and meaningful advising and/or mentoring relationships at the doctoral level, or any healthy advising/mentoring role at any educational stage. Ph.D. students heavily rely on their faculty advisors for socialization to the department and discipline (Delamont et al., 2000; Weidman et al., 2001; Golde, 2000) and advising and mentoring practices are key factors in a student's success, satisfaction, and socialization experience (Austin, 2002; Austin & McDaniels, 2006; Golde, 2005). In Barnes et al. (2010) and Golde's (2000) studies about doctoral advising, students in described elements of care as one of the important characteristics of a positive advising relationship. These advisors demonstrated responsiveness to their advisees needs, met the student were they were, and showed a genuine interest in the student as a person. These traits reflect Tronto's (1994) elements of care and can be included in all stages of socialization. If faculty members are successfully socializing their advisees to the department and discipline, they must have an understanding of their advisee's needs and situation and feel some level of responsibility for guiding students through the Ph.D. process. The level of care may vary, as some faculty view their role as more administrative and do not build a strong personal relationship (Lundsford, 2012), but a level of care still can (and should) be

intertwined in the socialization process and other aspects of the advising or mentoring process.

Graduate Student Attrition and Persistence

Recent literature highlights institutional concerns about high rates of doctoral student attrition (Nettles & Millett, 2006; Gardner, 2008; Gardner, 2009a; Lovitts, 2001; Golde, 2005; Maher et al., 2004). Estimated attrition rates in these studies range from 40% to 70% of doctoral students leaving their programs before completion. Student departure can impact students financially and emotionally and is quite expensive for universities. Tinto (1993) proposed that graduate student persistence is impacted by faculty-student interactions and the academic and social support systems at the university. Doctoral student support and socialization occurs at the department level, so doctoral persistence and attrition is affected by the individual departments, advisors, and research groups. Tinto highlights the importance of faculty advisors, as student experiences within departments can vary by advisor.

Lovitts (1996) explored the long term and short term effects of doctoral persistence or attrition through interviews with 816 graduate students. Of the participants, 511 had graduated and 305 did not complete their doctoral program. The study included nine disciplines within the sciences, social sciences, and humanities. The researcher found that attrition affects all disciplines.

In Lovitts (2001) study of doctoral program attrition rates, the survey responses and interviews revealed that the difference between degree completers and non-completers was not in academic ability but in what was occurring during their degree program. Lovitts found that doctoral students who leave their programs are typically less

integrated into their department community. There was no significant difference in grade point average between completers and non-completers, which challenges the idea that academic ability is a key contributor to attrition. Golde (1998) interviewed 58 non-completers and found that advisor-advisee relationships contributed to some students exiting their program. Differences in work style and a mismatch in expectations lead to dissatisfaction with the advising relationship and graduate program. One of the common reasons for departure was the realization that graduate school was not the right fit. The socialization process and advising relationship can help doctoral students adjust to their new environment, but it can also help students determine if the doctoral degree is the right place for them at that point in their life. Early departure is not always a bad thing, and leaving earlier in the doctoral degree is typically easier for the student, department, and advisor.

Garder (2009b) explored how faculty advisors and graduate students perceive causes of student departure. Through interviews with 34 faculty advisors and 60 Ph.D. student mothers, Gardner (2009b) found that students identified personal problems (marriage, children, family obligations) as a primary reason for leaving graduate programs. In contrast, when faculty advisors were asked about factors that affected Ph.D. mothers' attrition, only one faculty member listed parenting and pregnancy as a contributing factor. Faculty believed that the Ph.D. mothers left their programs because they were lacking motivation, lacking academic preparation, or they should never have started in the Ph.D. program. Some faculty advisors did list personal reasons as a factor in student departure, but they classified personal reasons as "mental health issues".

Gardner (2009b) notes that if faculty are not knowledgeable about reasons for student attrition and faculty members' role in attrition, it is difficult to improve the process.

For students with young children, they may experience a conflict between their roles of student and parent. When these conflicting roles cannot be negotiated, the student may choose to leave the university. The student has a responsibility to understand and navigate their multiple responsibilities, but student retention or attrition also reflects the institution or department's ability to provide access and support to students with multiple roles (Tinto, 1993).

Ph.D. Supervision – Academic Advising and Mentoring

At the undergraduate level, development models are available to guide advisors in working with students. At the doctoral level, best practices recommendations are available, but there is no prescriptive model that encompasses everything about working with graduate students (Barnes et al., 2010). Ph.D. advisors are teachers, role models, expert sources of information, encouragers, knowledgeable about departmental and university policies, sources of financial support, advocates, career mentors, and socializers. Specific tasks and expectations may vary by discipline and department (Austin, 2002).

The terms mentor and advisor are often used interchangeably when discussing the relationship between a Ph.D. student and faculty advisor (Barnes & Austin, 2009). The advisor-advisee relationship is often also a mentoring relationship. Nettles and Millett (2006) distinguished between the terms by describing the advisor role as acting in an official capacity (policies, approving coursework), while a mentoring role is a deeper relationship with investment in guiding students to completion of their Ph.D. Lunsford

(2012) noted that some mentors provide both career and psychosocial support, while advisors provide support to complete degree requirements. Some mentors might not provide career support that is doctoral degree specific, just as some advisors may not be able to provide both career and psychosocial support (Lundsford, 2012). In Lundsford's (2012) survey of 477 doctoral students, over half of the students considered their advisor to be a mentor and the majority believed mentoring contributed to graduate student success. Psychosocial support and career support from advisors were significantly related to satisfaction with the advising relationship. Schlosser, Knox, Moskovitz, & Hill (2003) make the important distinction that mentoring is typically a positive relationship, while academic advising can be positive or negative.

Advising Ph.D. students

In Barnes and Austin's (2009) study involving twenty-five doctoral advisors, faculty members described their advising responsibilities as helping advisees become successful, develop as professionals, and develop as researchers. Within their duty to help advisees be successful, faculty saw their obligations to include assessing the student's needs, helping the student progress, helping them find feasible dissertation projects, helping students cope with failure, and assisting with selecting committee members. Advisors believed their key advising functions included collaborating, mentoring, advocating, and chastising (Barnes & Austin, 2009). Some advisors in this study discussed the difference between a mentor and an advisor. An advisor is responsible for following up to ensure required paperwork is complete. A mentor is responsible for guiding their advisee's professional development and serving as a role model. Barnes and Austin (2009) also explored the characteristics of successful

advisor/advisee relationships. Faculty advisors described their relationships as friendly and/or professional, collegial, supportive and caring, accessible, and honest.

Barnes et al. (2010) surveyed 2,391 doctoral students about advising practices and behaviors. The researcher identified common positive and negative advising attributes. Positive attributes included accessibility (availability to meet and speed of responses), helpfulness (provides information to help students understand program expectations and rules), socializing (assists students with entry into the professional discipline), and caring (demonstrates interest and the student as a person). Negative attributes included faculty who are inaccessible, unhelpful, and uninterested in their students academically or personally. Barnes et al (2010) found that advising behaviors affect not only the student's perception of their advisor, but also their overall doctoral experience. Students who viewed their advisor as practicing positive advising behaviors were more likely to feel that their advisors helpfulness, accessibility, and interest assisted in their degree progress. Students who believed their advisor was not interested or not available also referenced delayed progress towards their degree goal.

Schlosser et al.'s (2003) qualitative study with sixteen counseling psychology Ph.D. students found that students who are satisfied with their advising relationship were typically able to choose their faculty advisor, while unsatisfied students are more like to report being assigned to their advisor. Satisfied students also reported having frequent individual meetings with their advisor, in addition to being part of group meetings with their advisor and research group. Career guidance was more likely to be part of the advising relationship for satisfied students, while unsatisfied students reported that their advisor did not provide career advice. Both groups of students were cautious about

sharing personal information with their faculty advisor, but satisfied students were more likely to share personal information, especially if it affected their professional life. Satisfied students were also more likely to share professional information with their advisor, including fears and insecurities. As students progress through their Ph.D. program, they continue to become even more satisfied or less satisfied with their advising relationship. Students that were unsatisfied did not report changes to becoming very satisfied. Many of the positive advising characteristics in Schlosser et al.'s (2003) study can also be described as mentoring characteristics.

In Golde's (2000) qualitative study of 68 former doctoral students who left their programs before completion, the researcher explored reasons for doctoral student attrition. Through interviews with former students from six institutions and nine disciplines, the researcher identified some characteristics of good advising relationships. The quality of interactions, amount of time spent, and sense of care from the advisor were important to the student respondents. The interviewees used descriptions that begin to cross into mentoring, such as advisors being interested in all areas of their life and advisors who are deeply interested and involved in professional growth and development. Negative advising attributes that contributed to the students' decisions to leave their graduate program include indifference, lack of support, and an uncaring environment.

Ph.D. students also have a responsibility to develop and maintain a productive relationship with their advisor, but advisors should be aware of the influence their behaviors and attitudes have on a student's graduate experience and completion. From the advisor's perspective, Delamont et al. (2000) interviewed faculty and found stories about the challenges of balancing involvement with being too involved. Advisors are

tasked with developing future scholars and academic leaders, so they must allow Ph.D. students freedom to steer their own research while also serving as a resource and guide.

Mentoring Ph.D. students

Mentoring relationships are typically more collaborative and interactive than the academic advising relationship. Mentoring is a one-to-one process where the mentor contributes their own experience and expertise to guide their mentee towards their intended objective (Cohen & Galbraith (1995). According to Williams-Nickelson (2009), a mentor is someone who works toward integrating a new member into the profession. Mentors feel responsibility or an obligation for the mentee's professional development. Mentoring relationships are built on rapport, trust, and realistic expectations (Williams-Nickelson, 2009). Effective mentoring practices may include providing opportunities for advancement, developing confidence and self esteem, offering support, goal setting, using influence and help the mentee navigate or gain entry to systems, provide feedback, and encourage balance and self-care. (Williams-Nickelson, 2009). Cohen and Galbraith (1995) note that mentoring can occur in academic environments such as the classroom, community-based activities, and through experiential learning. While all Ph.D. students have an academic advisor, Ph.D. mentorship is not as consistent (Austin, 2002). Not all students have mentors, which hinders student progress and limits Ph.D. students' understanding of the breadth and responsibilities associated with faculty roles or leadership positions in their intended field (Austin, 2002; Golde & Dore, 2001).

Prior research demonstrates that the mentoring relationship is impacted by commitment and perceived potential (Poteat, Shockley, & Allen, 2009; Green & Bauer, 1995). Poteat et al. (2009) explored how the doctoral mentoring relationship is affected

by commitment. The researchers surveyed 97 pairs of faculty mentors and doctoral students to learn more about relationship satisfaction and commitment from the mentor and student. The results demonstrated the importance of commitment, but for different reasons. Overall, satisfaction with the mentoring relationship was higher when there was commitment to the mentoring relationship. The doctoral students wanted more commitment from their faculty mentors because they wanted more guidance, and possibly because of the difference in power between the student and faculty member. The faculty mentors wanted more commitment from their doctoral student mentee, possibly in response to feeling needed. Green and Bauer (1995) conducted a longitudinal correlational study with 233 Ph.D. students. The researchers used a questionnaire to collect information about career and psychosocial aspects of mentoring, along with GRE scores to assess aptitude and indicators for success.

Anderson and Anderson's (2012) qualitative study with 17 doctoral students (Ph.D. and Ed.D.) highlighted the importance of faculty mentorship for doctoral students' professional development. Doctoral students credited their mentors for their guidance on research, publications, and grant proposals, all of which contributed to the students' marketability, competence, and confidence. Some mentoring duties in Anderson and Anderson's (2012) study included providing guidance on dissertations, degree milestones, and navigating the doctoral program requirements, which overlap with advising activities as defined by Nettles and Millett (2006). Doctoral students recognized their responsibility for seeking out mentor and being assertive when approaching faculty for support.

Ph.D. mentorship frequently follows an apprenticeship model. Golde, Bueschell, Jones, and Walker (2009) describe this as "the signature pedagogy of doctoral education" (p. 54). The faculty advisor is the "master" and the doctoral student is the "apprentice" in this model. At its worst, the apprenticeship model reflects institutional ownership and "connotations of indentured servitude" (p. 55). Golde et al. (2009) recommend multiple mentors to meet the varied needs of each student, rather than expecting a single faculty member to meet all of the academic, professional, and personal needs for each student in their research group. As described by Golde et al. (2009), faculty mentors are tasked with explaining and demonstrating their practice, creating assignments to help the student carry out learning tasks and gain confidence, and they should guide and coach students in a manner that increases complexity and transfers knowledge to the student apprentice. Mentorship should be customized to the student, which means the faculty member should know their student well. Under a collective mentorship model, the faculty mentors could work together with the student towards a shared vision of skills and knowledge necessary for academic and professional success in the field of study.

Students benefit from advisors and mentors who model a healthy work-life balance (Austin, 2002; Bieber & Worley, 2006). Doctoral students that hope to enter the professoriate look to their advisors and mentors for guidance on what to expect in their future careers. Prior studies show a range of perceptions about faculty members' work-life balance. Graduate students in Austin's (2002) study had the perception that it is difficult for faculty to balance academia and family, but few faculty members addressed this concern with their students. Some students in Beiber and Worley's (2006) study described faculty positions as having great flexibility, which could allow for work-life

balance, while other students had concerns that tenure track positions at research institutions would involve large work commitments with little time for family life. Modeling or encouraging work-life balance for graduate students can contribute to positive self-efficacy for student parents and alleviate some concerns that Ph.D. students have about faculty careers. Advising and mentoring behaviors have an impact on the academic pipeline and future leaders in academia. Mason et al (2013) identify family concerns as a significant contributor to students, especially female students, changing their goals away from faculty careers. They point to a lack of positive role models for work-family balance and negative messaging around the impact of babies on academic success.

Summary

This chapter has provided a review of the literature related to gender and the academic pipeline, work-life balance for graduate student mothers, the graduate student socialization process, contributing factors to graduate student attrition and persistence, and faculty members as advisors and mentors. The literature shows that parenting affects Ph.D. mothers and fathers differently, with Ph.D. mothers being underrepresented in tenure-track positions. Women are also more likely to take on the majority of childcare and household tasks, even in dual-career families. Without adequate family-friendly policies and services, female Ph.D. students with children struggle to succeed in both parenting and their degree program. Student with children may feel isolated as they do not fit the typical graduate student experience. Some may choose to hide their parenting role from their advisor and research group to avoid being viewed as less committed to their research. The socialization process, which introduces Ph.D. students to their

department and discipline, is a gendered experience. Ph.D. mothers experience the socialization process differently, and face barriers to successful entry to the department, research group, and discipline if their personal roles are in conflict with department scheduling, norms, and expectations.

The research studies also highlighted differences between the advisor and student perspectives. While family obligations were a significant factor for students leaving Ph.D. programs before completion, faculty believed students left due to lack of ability or motivation. With advisors playing a crucial role in student success, it is concerning if faculty are not aware of a significant factor affecting student attrition. Studies of advising practices from the student and faculty perspective found similar positive attributes: caring, helpfulness, and accessibility were all important advising/mentoring traits. While the terms "advisor" and "mentor" have been used interchangeably in some prior studies, there is a distinction between the two roles. Some advisors are also mentors, which improves the advisor-advisee relationship. Advisors complete official tasks tied to degree progress, which mentors are invested in the student's academic, professional, and personal success.

CHAPTER III

METHODOLOGY

Restatement of Purpose

The purpose of this study was to explore the academic advising and mentoring experiences of female Ph.D. students with children. Through interviews with these students, this research study contributes to the existing body of knowledge by providing information about the advising and mentoring experiences and needs of this population.

Research Design

One-on-one qualitative interviews were used to explore the academic advising and mentoring experiences of doctoral students with children. As described by Creswell (2013), qualitative research is useful for exploring the experiences of sample populations that have not been included in previous studies. A qualitative research design allowed the researcher to conduct interviews and collect rich data regarding student experiences that are missing from the existing literature. Qualitative research aims to understand how individuals make sense of their experiences and environment and how the different components work together (Merriam, 1998). This study explored how female Ph.D. students with children experience advising and mentoring relationships and how their roles of mother, student, mentee, and advisee connect, from the students' perspectives. The advising or mentoring relationship between a faculty member and Ph.D. student is complex, so a qualitative approach allowed for a more detailed and complete picture of that relationship through richer descriptions. This research project analyzes the needs, beliefs, and experiences of doctoral students at this specific university, and does not focus on all doctoral students' experiences.

Semi-structured interviews explore a specific topic with all participants, but the list of questions and style of questioning allows the researcher to adapt and respond to the participant's responses (Merriam & Tisdell, 2016). Kvale (1996) describes the semi-structured interview as "an interview whose purpose is to obtain descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena" (p. 5). Interviews are effective for exploring how individuals interpret their experiences or how they feel about an event or relationship (Merriam & Tisdell, 2016). The purpose of the interview was to collect information about the academic advising and mentoring experiences of female Ph.D. students with children. A list of questions was included in the interview protocol, but the sub-questions were not be asked of all participants, or wording was changed slightly depending on how they responded to prior questions. The researcher obtained information through interview questions and listening, with follow-up questions in response to the experiences of each participant. The interview questions asked participants to remember prior interactions with their faculty advisor, to describe the event, and explore how the student felt about that event.

Research Setting

This study took place at an elite private university in the Bay Area. The University had 9,304 graduate students and 7,032 undergraduate students. A significant number of enrolled graduate students were master's students, with 2,338 master's degrees awarded in 2015-16, 269 professional degrees (JD, MD), and 763 Ph.D. degrees. Some of the master's recipients earned the masters on route to their Ph.D. degree. The majority of enrolled graduate students were male (61%), 34% of graduate students were international students, and 38% of graduate students identified as White. Thirty-eight

percent of graduate students were in the School of Engineering, 25% in the School of Humanities and Sciences, 12% in the School of Medicine, 11% in the School of Business, 7% in the Law School, 4% in Earth Sciences, and 3% in Education. The University had 2,180 faculty members, of which 69% were tenured or tenure-track. Seventy-two percent of the faculty were male. Table 1 and Table 2 provide an overview of the demographics of the graduate student population and faculty population at the university where the study was conducted.

Table 1

Fall 2016 Graduate Student Demographics for the University Where the Study was Conducted

Demographic Factor	Percentage
Total Enrollment: 9,304	
Sex	
Women	39%
Men	61%
By School	
Business	11%
Earth Sciences	4%
Education	3%
Engineering	38%
Humanities & Sciences	25%
Law	7%
Medicine	12%
Ethnic Diversity	
African American	2%
Asian	14%
International	33%
Native American	< 1%
Native Hawaiian/Pacific Islander	< 1%
Hispanic/Latino	7%
White	38%
Declined to State/Other	1%
Geographic Origin	
California	36%
Other U.S.	30%
International	34%

Table 2

Fall 2016 Faculty Demographics for the University Where the Study was Conducted

Demographic Factor	Percentage
Total Faculty: 2,180	
Sex	
Women	28%
Men	72%
By School	
Business	6%
Earth Sciences	3%
Education	3%
Engineering	12%
Humanities & Sciences	27%
Law	3%
Medicine	45%
Other	3%
Ethnic Diversity	
African American	2%
Asian	17%
International	5%
Native American	< 1%
Non-Minority	71%
Two or more races	< 1%
Declined to State/Unidentified	5%
Tenure Status	
Tenure Line, Tenured	54%
Tenure Line, Non Tenured	15%
Non-Tenure Line	7%
Medical Center Line	24%
Tenure-Line Faculty	
Professors	63%
Associate Professors	17%
Assistant Professors	20%

Population

The sample consisted of ten female Ph.D. students with children ages ten and under. Participants had all completed least one year (three academic quarters) in their Ph.D. program. Students were selected to represent a variety of disciplines. They were interviewed about their academic advising and mentoring experiences with their doctoral

advisor. All interviews were conducted at the university and were audio-recorded, with consent. Interviews were semi-structured. An email invitation was sent out to the campus email lists for university students and staff that have children. The founder of the Mothers in Academia network agreed to forward the email invitation to her group. Study participants were selected from responses to those invitation, with participants from a variety of disciplines.

Female students with children were the focus of this project because the literature shows that mothers experience parenting and graduate school differently than men (Ward & Wolf-Wendel, 2012; Sallee, 2011; Kuperberg, 2009).

Instrumentation

Participants completed a demographic form with information about gender, age, race, year in Ph.D. program, number of children, ages of children, if they have ever changed advisors during their Ph.D. program, and how long they had been advised by their current doctoral advisor (Appendix B).

An interview protocol was developed to collect information about academic advising and mentoring experiences of female Ph.D. students with children, specifically how they perceived the academic advising and mentoring experience, what expectations they had of their advisor when entering the program, what academic advising and mentoring practices assisted students in balancing academia and family, and what academic advising and mentoring behaviors created additional stress for student parents. The interview was semi-structured with opportunities to delve into certain responses in more detail.

Pilot interviews were conducted to receive feedback and refine the interview protocol. Two Ph.D. students in professional schools (School of Law and School of Business) were asked to pilot the interview protocol. These students were female Ph.D. students with children at the same university where the study took place. These students both described their experiences as being somewhat different from the experiences of Ph.D. students in other academic units because they are situated in programs that are primarily preparing graduate students for professional careers outside of academia. Requirements, funding, and socialization may have differed from the experiences of Ph.D. students in other academic departments, but the pilot participants were able to speak to their experiences as mothers in Ph.D. programs and interactions with their advisors and mentors. These volunteers were asked for feedback about the clarity and content of the interview questions. Unclear or confusing questions were clarified based on this feedback. Conversations with the volunteers led to specific questions about if or when students told their advisors about pregnancies or children, if the students brought their children to their offices or department functions, and if their advisor had met their children.

The research questions were addressed through the following interview questions:

1) General information about the advising relationship.
    a. How long have you been in the doctoral program?
    b. Why did you select this program?
    c. Were you assigned your advisor or did you select your advisor? If you selected your advisor, why did you choose this advisor?

d. Have you changed advisors at any point in your program? If so, how long have you been with your current advisor?

e. Approximately how many other students are in your research group? Do any of the other students have children, to your knowledge?

f. Is your advisor male or female? What is their approximate age? Does your advisor have children, and if so what are their approximate ages?

g. When did you tell your advisor about your children? How did they respond? Have they met your children?

2) Research Question: What expectations do female Ph.D. students with children have of their faculty advisors?

a. Prior to entering the program, what conversations did you have with your advisor or other members of the department about expectations and degree progress?

b. What expectations did you have of an advisor-advisee relationship before starting the Ph.D. program?

c. How have those expectations been met, or not met?

d. How often do you meet with your advisor?

e. What is the most successful or satisfying aspect of your advising relationship?

f. How do you define academic advising? How do you define mentoring?

3) Research Question: What academic advising behaviors and practices assist/hinder participants in balancing family and academic obligations?

a. How would you describe your faculty supervisor's academic advising style?
b. Do you consider your advisor to be knowledgeable about degree milestones and requirements?
c. What conversations have you had with your advisor about academic goals?
d. Can you give me an example of a time when your family obligations conflicted with your academic responsibilities?
e. In the situation you just described, what did your advisor do that was supportive or helpful?
f. What did your advisor do that was not supportive or helpful?
g. What do you wish your advisor had said or done in that situation?
h. How satisfied are you with the quality of academic advising provided by your faculty advisor?

4) Research Question: What mentoring behaviors and practices assist/hinder participants in balancing family and academic obligations?
   a. Do you consider your faculty advisor to be a mentor? Why or why not?
   b. Are you comfortable discussing family and personal life with your faculty advisor? Why or why not?
   c. Please describe a time when your faculty advisor acted as a mentor.
   d. In the situation described, how did you benefit from mentorship?
   e. Is there anything else you wish your advisor had done in that situation?
   f. How satisfied or dissatisfied are you with the mentoring relationship?

g. Are there other individuals at the university who you consider to be your mentor(s)? If so, how do these relationships differ from your relationship with your faculty advisor?

Human Subjects Protection

Permission was obtained from the Institutional Review Board at the University of San Francisco. Human subjects were protected during this research. Pseudonyms were used to protect the confidentiality of interviewed research participants. All interview recordings and electronic documents were stored on a password protected computer. Any physical documents were stored in a locked drawer that could only be accessed by the researcher's key. Upon completion of the research, all recordings and identifying information were destroyed. Research results were available to all interviewed participants.

Written permission was obtained from all interviewed Ph.D. students participating in the study. Participants were made aware of the purpose of the research study. Consent forms are stored for three years in compliance with University of San Francisco's IRB guidelines.

Data Collection

All interviews were recorded, submitted to a transcription service, and reviewed by the researcher multiple times to check for accuracy. Transcriptions were offered to the participants to ensure validity. The interviews were semi-structured, guided by the questions listed in the interview protocol. Depending on how the participants responded to some of the open-ended sub-questions, the researcher had the opportunity to further explore those themes with the interviewee (Merriam, 1998). Two audio recorders were

used for each interview and the researcher made written notes and observations during the interview. The interviews were transcribed verbatim and the text transcriptions were made available to the interviewees for clarification or corrections.

Students that responded to the interview request were filtered by criteria of being a current Ph.D. student at the university, having completed at least one year (three academic quarters) in their Ph.D. program, and being a mother with at least one child between the ages of zero and ten years old. Participants were recruited through a university email list that serves faculty, staff, and students with children. The email notice included information about the research project. Participants also received an information sheet about the project during the follow-up email to schedule the interview. The researcher described the project verbally at the start of the interview, along with obtaining consent forms. A $10 gift card was offered at the end of the interview.

Each interview was conducted at a location at the university convenient for the Ph.D. student and interviewer. Nine interviews were conducted in person and one was conducted via teleconferencing because the student lives and works away from campus and family obligations prevented her from meeting in person. Some mothers asked to bring their children to the interview, which was encouraged and allowed by the researcher. The interviews lasted between 40 and 60 minutes and were audio-taped.

Data Analysis

All interviews were transcribed and coded to the research questions. To identify emergent themes from the interviews, concepts, phrases, and words were grouped under codes/themes. Researcher notes from the interviews were also used to identify themes. Themes and categories were informed by the purpose of the study, the researcher's

knowledge, the theoretical framework, and the meanings discussed by the participants (Merriam, 1998). Merriam (1998) suggests that data analysis begins with data collection. Notes and reflections from the first interview informed topics to observe or look for in the next interview.

Interview responses were divided into topic areas, and then further subdivided into categories. Miles and Huberman (1994) suggest using a "start list" of codes, created from the research questions, framework, and interview protocol. Codes were revised after reading through the first couple transcripts, to check for fit and relevance (Miles & Huberman, 1994). Once the refined codes were set, the first couple transcripts were be recoded to be consistent with the new list. Additional changes in codes were made throughout the analysis process. Interviews were coded in an online system at Dedoose.com. The list of codes included:

1. Tronto's Ethic of Care
    a. Attentiveness
    b. Responsibility
    c. Competence
    d. Responsiveness
2. Experiences
    a. Life event change
    b. Work-life balance
    c. Personal concerns
3. Expectations
    a. Frequency
    b. Advising expectations
    c. Mentoring expectations
    d. Expectations met
    e. Expectations not met
4. Academic Advising
    a. Advisor fit
    b. Advisor selection
    c. Advisor assignment
    d. Degree milestones
    e. Benefits of advising relationship
    f. Harm from advising relationship

5. Mentoring
    a. Mentor selection
    b. Role modeling
    c. Personal relationship
    d. Professional development
    e. Advocacy
    f. Benefits of mentoring relationship
    g. Harm from mentoring relationship

Background of the Researcher

The researcher is a higher education professional with over 13 years of experience in student services, with 12 of those years as an employee at the university where the research will be conducted. The researcher works directly with Ph.D. students and faculty members, with duties including managing graduate admissions, tracking degree progress and milestones, and administering graduate student funding. Discussions with students and faculty often include providing orientation information, explaining university and department policies, advisor-advisee relationships, and providing information about campus resources and support services.

The researcher also has experience working with undergraduate students, high school students, and postdoctoral scholars. She has organized professional development workshops and conferences for student services staff at her university, including a conference designed for staff who serve the graduate student population. She also participates in a number of campus-wide committees and working groups, including committees looking at graduate policies and student data. The researcher has also volunteered as a college mentor for the Peninsula College Fund, a writing coach and college coach for College Summit, and a mentor for her high school alma mater.

The researcher holds an M.A. in School Counseling and a B.S. in Community and Regional Development. She is a parent to three children, ages 18, 11, and 4. She was

drawn to this particular topic due to her personal experience as a graduate student with children and her years of service working with graduate students, including doctoral students with children. She has worked in multiple disciplines and understands how unique each individual student's Ph.D. journey can be and the important role faculty advisors play in the doctoral student experience.

CHAPTER IV

FINDINGS

Overview

The purpose of this study was to explore the academic advising and mentoring experiences of female Ph.D. students with children. A qualitative approach was chosen to best explore the experiences of female Ph.D. students with children. To answer the three research questions, ten female Ph.D. students with children were interviewed about their experiences.

Data collected were analyzed for emerging themes about advising and mentoring expectations, the potential benefits and harm from advising relationships, and the potential benefits and harm from mentoring relationships. The themes that guided the data collection were based on Tronto's (1993) four elements of an ethic of care. Topics included

Participant Profiles

The following students were interviewed as part of this study. To protect participants' identities, they were identified by a pseudonym. Pseudonyms were selected from a list of popular baby names. The study included six social sciences students and four science/engineering students. Fields of study included chemistry, communication, computational mathematics, education, electrical engineering, neurosciences, and sociology. Some of the students were part of very small cohorts (as small as two students), so individual participants' fields of study are described as social sciences, science, or engineering to help protect their identities. Table 3 provides demographic information about the interviewees.

Table 3

Profiles of Interviewed Students

Student	Area of Study	Year in Ph.D. Program	Age	Race/ Ethnicity	Number of Children	Age(s) of Child(ren)
Emma	Social Science	Fifth	30	Hispanic/ Latino	1	1 year
Olivia	Social Science	Sixth	31	White	1	1 year
Ava	Science	Sixth	32	Asian	1	6 months
Isabella	Social Science	Fifth	36	White	2	1 year, 5 years
Sophia	Engineering	Fifth	35	White	2	3 years, 6 years
Mia	Science	Sixth	29	Asian	1	Newborn
Amelia	Social Science	Fourth	48	White	2	7 years, 9 years
Abigail	Social Science	Fourth	42	White	2	4 years, 6 years
Emily	Science	Second	29	White	1	1 year
Harper	Social Science	Third	46	White	1	10 years

Emma

Emma was in her fifth year in a social sciences Ph.D. program at the time of the interview. She identified as a 30-year-old Latina. At the time of the interview, she had a one-year-old child who was born while Emma was in the Ph.D. program. Emma had been with her current advisor for three years and changed advisors earlier in her academic career. She planned to graduate in the next academic year. Her advisor was a male in his mid-40s who had two adolescent children (approximate ages 12 and 17). Her advisor had six other advisees at the time, none of which had children to Emma's knowledge.

Olivia

Olivia was in her sixth year in a social sciences Ph.D. program at the time of the interview. She identified as a 31-year-old White female. At the time of the interview she

had a one-year-old child who was born while Olivia was in the Ph.D. program. Olivia had been with her current advisor for three years and changed advisors twice earlier in her academic career. She planned to graduate at the end of the current academic year. Her advisor was a male who one adult child. The advisor was approaching retirement and Olivia was his only advisee.

Ava

Ava was in her sixth year in a science Ph.D. program at the time of the interview. She identified as a 32-year-old Asian female. At the time of the interview she had a six-month-old child who was born while Ava was in the Ph.D. program. Ava had been with her current advisor for five years and changed advisors earlier in her academic career. She graduated shortly after the interview was conducted. Her advisor was a male in his 50s with two children (middle school and college aged). The advisor had one other advisee and two postdoctoral scholars in the research group.

Isabella

Isabella was in her fifth year in a social sciences Ph.D. program at the time of the interview. She identified as a 36-year-old White female. She has had the same advisor for her entire Ph.D. career. At the time of the interview she had two children, ages five and one. The younger child was born while Isabella was in the Ph.D. program. The older child was born before Isabella started the Ph.D. program; she was pregnant when she applied to the Ph.D. program. She planned to graduate in the next academic year. Her advisor was a male in his mid-40s with two young children. The advisor had four other advisees.

Sophia

Sophia was in her fifth year of an engineering Ph.D. program at the time of the interview. She identified as a 35-year-old White female. At the time of the interview she had two children, ages three and six. The younger child was born while Sophia was in the Ph.D. program. Sophia has had the same advisor for her entire Ph.D. career. She planned to graduate at the end of the current academic year. Her advisor was a male in his early 30s with one young child. There were six other students in the research group.

Mia

Mia was in her sixth year of a science Ph.D. program at the time of the interview. She identified as a 29-year-old Asian female. At the time of the study she had a newborn child. She had been with her current advisor for two years and changed advisors earlier in her academic career after a leave of absence. She planned to graduate in the next academic year. Her advisor was a female in her late 60s with two adult children. There were four other students and two postdoctoral scholars in the research group.

Amelia

Amelia was in her fourth year of a social science Ph.D. program at the time of the interview. She identified as a 48-year-old White female. At the time of the interview she had two children, ages seven and nine, who were born prior to starting the Ph.D. program. Amelia had been with the same advisor since entering the Ph.D. program. She planned to graduate in two to three years. Her advisor was a female in her late 40s with no children. The advisor had six other graduate students, none of which had children.

Abigail

Abigail was in her fourth year of a social sciences Ph.D. program at the time of the interview. She identified as 42-year-old White female. At the time of the interview she had two children, ages four and six, who were both born prior to starting the Ph.D. program. Abigail had been with the same advisor since entering the Ph.D. program. She planned to graduate in one to two years. Her advisor was a male in his late 50s with one adult child. Abigail was his only advisee at the time.

Emily

Emily was in her second year of a sciences Ph.D. program at the time of the interview. She identified as a 29-year-old White female. At the time of the interview she had a one-year-old child who was born at the beginning of the Ph.D. program. She had been with the same advisor for her entire Ph.D. career and completed a Master's degree with the same advisor. Her baby was born the same quarter she transitioned into the Ph.D. program from the Master's program. Her advisor was a male in his 40s with two children, approximate ages eight and ten. There were four other students in the research group and eight postdocs or research staff. The other students and researchers did not have children.

Harper

Harper was in her third year of a social science Ph.D. program at the time of the interview. She identified as a 46-year-old White female. At the time of the interview she had one child, age ten, who was born prior to Harper entering the Ph.D. program. She planned to graduate within two to three years. She had two advisors, one was a female in her early 60s with adult children, and the other was a male in his early 40s with two

school-aged children. She had the female advisor since entering the program; she initially had a different co-advisor but changed during her second year in the Ph.D. program.

Research Questions and Findings

The findings gathered from student interviews are outlined below. Emergent themes were highlighted and interview details are provided where appropriate.

Research question one: What expectations do female Ph.D. students with children have of their faculty advisors?

This research question explored what expectations students had of their faculty advisors and if the study participants felt that their expectations had been met. Themes were identified from interview responses.

Initial advising expectations

When the students started their Ph.D. programs, their initial expectations were that their advisors would be accessible and available, would provide timely feedback, would be knowledgeable about degree requirements, and would provide professional guidance.

Upon entry to their Ph.D. programs, students expected frequent and consistent communication from their advisors, with regular meetings and timely feedback about research projects. Frequency of contact varied by student, even from the beginning of their Ph.D. programs. Some had regular weekly meetings with their advisors, while others met monthly. In the early stages of their programs, students expected and appreciated more direct contact and guidance as they adapted to the Ph.D. program, coursework, and their research environment.

Olivia described her initial expectations, which unfortunately were not met in her advising relationship:

> It would be this very mentored, hands on, meeting regularly. I'd get involved in projects; they would help me out with logistical research resources, ideally introducing me to a field site or an organization or something that could do that. And none of that happened…some of it is just there was not a good fit between me and their research interests.

Some advisors modeled work-life balance expectations from the beginning. Isabella appreciated that her advisor set the tone by keeping Saturdays as his family days when he would not respond to work or student related emails. He was also very clear about these boundaries when Isabella started the Ph.D. program, so there was no confusion or misunderstanding about her advisor's availability.

Changes to expectations since starting the Ph.D.

Over time, students' expectations changed. This was typically through a combination of the student's needs changing as they advanced through the program and their advisor's availability and obligations changing as faculty advanced in their own careers. For some students who became new mothers during their program, parenting changed their perspectives and values.

Communication expectations changed over time. Most students continued to have regular meetings with their advisors (weekly or monthly), but a few had difficulty getting responses from their advisor. As their obligations and workload increased, the interviewees expected flexibility in the mode of communication. Some students lived further away from campus and came to campus less frequently once they completed the

majority of their coursework. Some participated in group meetings remotely, others were able to communicate with their advisor over the weekends and by text messaging, others set boundaries on their time and would not schedule advising meetings after 5pm or 6pm so they could be home with their families. A more hands-off approach was appreciated towards the end of the program, as long as the advisor was still responsive when necessary.

Advisor availability was also dependent on their other roles within the university and off-campus. Ava's advisor took on an administrative leadership role on campus, so he was less available to his advisees. She described their advising meetings as being focused on the research, but felt that the students and the research group were treated "as a hobby of his." As soon as their scheduled hour was almost up her advisor would make comments about needing "to get back to my actual job." Sophia's advisor took a leave to run a start-up company. Prior to taking a leave, he was very involved, which was helpful early in her career. Now that Sophia is further along, she prefers that he is less involved.

> She describes the difference as: It's like two halves. It's before he went to do the startup and after. Before, he was very, very hands-on. We were also just building up the lab. There was nothing and we had to do a lot of stuff, so he was very hands-on, very involved in experiments. And now, he is only giving advice. So it's very different.

As students socialized to the department and research group culture and got to know their advisor, they determined which expectations were not being met and which expectations needed to be reevaluated. Ava described some negative experiences, but stated that she was still satisfied with her advising experience. "I was really naïve. I had

hoped that I would become best buddies with my advisor. That didn't turn out to be the case. But overall, I have learned to be a better person in handling relationships than when I first started the Ph.D. program." She also acknowledged that she should have reached out to her advisor more, so the lack of connection may have been improved with additional time and effort. Ava did make several comments about wishing she had a closer relationship to her advisor. "I've heard about 'unicorns' – friends at other universities have amazing advisors, with mentorship and a personal connection. I haven't found one yet, maybe I'll have one when I start my postdoc." Her Ph.D. experiences and those unmet expectations have already shaped some of her hopes and expectations for her next position.

Parenting gave some students a different perspective on their expectations and values. Emily discussed how her priorities differed from those of her peers because of her parenting role. "I think I'm more careful about deciding what to do or where to put my time than my peers, or than when I was younger and didn't have this [family obligation]." For Ava, her level of satisfaction changed once she became a mother. She was "so bitter" about her experience before having her child, but she believes motherhood gave her a different perspective and she no longer lets the negativity bother her. Parenting helped students prioritize their time and focus on the important aspects of their personal lives and research lives so they could effectively manage both. This impacted their advising relationship as they either ignored negativity in some cases or took initiative to direct their Ph.D. experience to meet their schedule and needs.

If a student changed advisors during their program, their prior experiences impacted their expectations going into a new advising relationship. For Mia, her advising

relationship had limitations due to her research topic, but her overall experience was an improvement from the advising relationship she had prior to taking a leave of absence. "I think for better or worse, I've chosen a research topic that is so outside of her field that I feel like she has a very hard time guiding me toward useful solutions when I have a problem. So at the moment, I don't feel like she's a mentor, but at the same time I appreciate that I have a better working relationship with her."

Olivia changed advisors due to lack of fit. Her next advisor did not receive tenure and left the university, so she was forced to find yet another advisor during her fifth year. Her most recent advisor had limited overlapping research interests, but she was at the point where she just needed someone to serve as an advisor so she could finish the Ph.D. program. Overall, she describes her experiences as "a disappointment."

> She stated: the best advisor-advisee relationships really come from shared research projects. I did one with somebody who's not even on my committee and the amount I learned in that project is just…can't compare to anything else I've done in grad school. So when those things happen, they're great. But you can't count on it.

Funding transparency

Overall, the students expected that their advisor would provide adequate funding for the student to finish the Ph.D. program, or at the least that the advisor will provide five years of funding and communicate in advance if funding will not continue. Mia was only guaranteed four years of funding, which was standard for her program. Funding sources and availability varied by discipline. Students in the sciences and engineering had funding from their department or from their advisor's research grants. Social sciences

students were generally guaranteed five years of department funding and then needed to find their own funding source. In two cases (Emma and Amelia), a social science student's advisor had funding available for a sixth year.

For students who obtain funding beyond their fifth year, this is generally a relief, but some felt their advisor was using the funding as an opportunity to extend the student's time to degree. Abigail received a three-year fellowship, but she felt that her advisor was "going to stretch it out for three years, which isn't fair." She hoped to finish earlier, but her funding did not provide a sense of urgency for her advisor to provide feedback in a timely manner and assist her in completing and publishing her research. Amelia was grateful that her advisor was providing a sixth year of funding, but wanted to finish in five years to seek future employment "because it's money – from my family's perspective, I really could use an income." Olivia received a fellowship for her sixth year of study, but she expressed frustration with how her department communicates about funding and time to degree. She does not feel that the process to obtain additional funding is transparent and some students are left without support. "They just say, 'Oh it works out for everyone.' Because the people for whom it doesn't work out are ashamed to say anything."

Funding was a significant concern for students due to the high cost of living in the area, daycare costs, and health care costs especially during maternity leave. Students at the university are not considered employees so they are not eligible for maternity leave, but there is a childbirth accommodation period available which includes a delay in milestones and supplemental funding from a central office if students are receiving assistantship funding from their program. Of the students who had children during their

Ph.D. program, the majority felt they received adequate financial support from their advisor during the first few months following the birth of their child. These students reported that their advisors were flexible and understanding about workload and expectations during those first few months. At the time of the interview, Mia was not sure if she would receive funding. Her advisor had threatened not to pay her during the maternity period, but Mia said, "I suspect she will do the right thing and pay me, and I will take my eight weeks, and things will go smoothly."

Olivia and Ava were not receiving funding prior to the birth of their children, so they did not receive funding postpartum. They were both aware of this ahead of time. Olivia chose to take a leave of absence because her husband's salary and insurance could support them. Ava decided to remain on active student status and pay tuition out-of-pocket because she needed the insurance benefits and housing depended on their active student status. Olivia was disappointed that advisors and staff do not always realize that "there's this whole constellation of services that kind of have to fall into place…they're all tied to something and when one thing falls out of place, it's hard." She discussed how certain student resources and benefits are linked to active student status, so pregnant and parenting students cannot always opt to take a leave of absence or they risk losing health care, housing, and priority on campus daycare lists.

Emma, Ava, Isabella, Sophia, Amelia, and Emily were living in on-campus family housing, which is more affordable than living off campus and provides a sense of community with other student parents. Olivia, Mia, Abigail, and Harper live off campus. Two of the off-campus students (Abigail and Harper) lived over two hours away from campus, in more affordable regions. They commuted to campus two to three times a

week, depending on the quarter. Several students commented that they did not know if they would be able to afford to be a student if they were not living on campus. All ten students had spouses who worked full-time and provided the majority of their family income.

Maintain a high level of professionalism

The participants expected that their advisors would behave in a professional manner, including maintaining a healthy working relationship, consistency in expectations within the research group, providing constructive feedback, and having appropriate responses to pregnancy and family events. The academic environment is a professional environment and faculty as supervisors should not be exempt from typical human resources policies regarding performance standards, pregnancy, and harassment.

For the students who were pregnant during their Ph.D. program, there was some concern about how to tell their advisor and department. The majority of mothers waited until the second trimester to announce their pregnancy, with the exception of Sophia who let her advisor know early on that she could not be exposed to certain hazardous materials in the lab. All ten participants wanted to have children during graduate school. Ava discussed the impact research and discipline has on family planning for some students. In some fields, "most likely you work with chemicals. Because of that, a lot of people decide not to have kids when they're in grad school."

Some let their advisor know in advance that they may be starting a family and others moved some obligations based on their estimated due date. Olivia tried to time pregnancy and birth around a large research trip, but was pregnant sooner than expected. She moved her research trip up and let her advisor and research committee know that her

trip was happening earlier due to pregnancy. Her advisor and committee were supportive.

Ava had some challenges with her advising relationship, but she appreciated that "he never questions why I want to pursue a postdoc position despite the fact that I have a kid. Not that he cared about whether I want to continue on to research, but the fact that he did not discourage me was really helpful, because I heard other people whose faculty were like, 'Oh, well, you have a kid. Are you sure you can continue on doing science?'"

Abigail was not satisfied with the advising relationship due to lack of engagement and communication from her advisor. She saw him as roadblock: "I like the research. I can't publish anything because he never gets back to me with edits and won't let me submit anything unless he approves it, so I'm waiting two years on some things." Abigail entered the Ph.D. program with expectations that family was important and work-life balance could be a priority. Prior to entering the program, her advisor "had me talk to all the people in the program that had kids. He was very charming, very supportive, saying, [University] really takes care of their own…so all things led to the assumption that kids would be an okay thing and family was important." A few years later, it became very apparent that family was viewed as a conflict so Abigail avoided discussing her family with her advisor.

Harper experienced harm caused by negativity and lack of responsibility from her initial advisor: "his approach to my work was mean-spirited. It really took a big toll on my confidence in my own work, my level of just feeing okay with who I am… It got to the point where I would get incredibly anxious any time I had anything coming up that I had to talk with him about." This relationship was not productive and hindered Harper's

academic success and progress, so she ultimately found a new advisor due to the lack of professionalism.

Students expected advisors to maintain some level of consistency within the research group. The majority of interviewees felt they generally received the same professional development and research opportunities as their peers who did not have children. The interviewees did discuss some peers (also Ph.D. students) who felt judged by their advisor for starting a family during graduate school, and believed they received different advice and opportunities as a result. When students did see discrepancies in opportunities and expectations, it was a source of frustration and conflict. The reasons behind advisors actions are unknown, so it may or may not be unrelated to the student's parenting role. Abigail lived away from campus and her commute was several hours long. Her research group had regular meetings once a week and another student also lived several hours away. That male student was able to Skype in for the group meetings, as did a few other students who did not live remotely. When Abigail planned to use Skype for the group meetings, her advisor was angry and insisted that Abigail must be physically present on campus for those meetings. He stated this was a university requirement, which is incorrect information. There was no explanation for the difference in standards and opportunities. For Abigail, "This was uncomfortable and I was basically ready to quit because you can imagine it's just so stressful having kids and a husband and then trying to maintain those relationships and then commuting and doing everything you need to do."

Research question two: What academic advising behaviors and practices assist or hinder female Ph.D. students in balancing family and academic obligations?

This research question explored themes surrounding advising behaviors and practices and how those behaviors impacted student experiences. Themes were identified from student interview responses.

Definition of advising

Sophia describes as an advisor as someone who "only talks to you about your research." Mia sees an advisor as "pretty neutral, pretty professional," a faculty member who meets with students and gives feedback, but "does not get engaged in their advisee's personal lives." An advisor is who students rely on "to know how to get through the program in addition to how to do research," according to Amelia. Emily views an advisor as "a role or a job, where a mentor is someone you really look up to, so someone who's performing that job well enough that you would like to imitate them at some point."

Quality of advising support

Each of the students experienced flexibility in finding an advisor who was a good match for them personally and academically. The majority selected an advisor during the admissions process. The few that were assigned an advisor the first year had flexibility in finding a new advisor. Reasons for changing advisors included changing research interests or methodology, faculty changing status (retirement, not receiving tenure, leaving the university), conflicting expectations, and harm caused by the advising relationship. Emma, Olivia, Isabella, Sophia, Amelia, Abigail, Emily, and Harper selected advisors during the admissions process. Ava did not have an advisor when she

arrived, as her department has them find an advisor during the first quarter. Mia did four rotations during her first year to find an advisor. She did not have a productive relationship with her initial advisor so she took a leave of absence. When she returned from her leave she found a new advisor and lab group that was a better fit.

Abigail, Emily, and Harper each credited their advisor's positive approach to parenting during the admissions process as a primary reason why they decided to join the Ph.D. program. Unfortunately, Abigail's advisors subsequent actions did not demonstrate a true care for family. Emily was visibly pregnant when she started working with her advisor. "He was talking about parenting and things, that's I think a big aspect of advising, is adapting to the needs of your students to some extent." When Harper was deciding whether to enter the Ph.D. program, her female advisor "talked about having been a mom when she got her Ph.D., and she was also older when she got her Ph.D. She leveraged that as something that would be something that she could offer in our relationship."

For Ava, who felt her advisor "just didn't care," her advisor was still able to take responsibility for some advising related tasks like research meetings and writing a letter of recommendation. The caring relationship did not extend to the competence or responsiveness elements of Tronto's (1993) ethic of care.

Advisors who neglect to take responsibility for providing care or fail to recognize the need for care can cause further harm. In Abigail's advising relationship, the lack of support and action from her advisor potentially prolonged her Ph.D. career, jeopardized her funding situation, and caused doubt and poor sense of self. Her advisor's inaction or negative actions impacted her personal life as the stress affected her marriage and family.

"I'm not really proud of how I'm dealing with this. It's just such a struggle, because I love the research but I don't love how I'm being treated or how it makes me feel. Then you're stressed out and I feel like I take it out on my kids sometimes and then I feel terrible."

Conflict management

Students were asked to describe a time when their family obligations conflicted with their academic responsibilities, along with how they managed that conflict and how their advisor responded. These conflicts typically revolved around teaching obligations, advising meetings, and timing research tasks around pregnancy and the postpartum period. Emma described bringing her baby to office hours because he was sick and could not go to daycare. Her advisor appeared to be understanding and supportive; he smiled and never brought it up again. Similarly, Amelia brought one of her children to a department colloquium. No one said anything about her child being there, but she got the feeling that her advisor felt "that's not really what we do here."

Amelia had school-aged children, so she was without childcare during school holidays and staff development days. She felt comfortable occasionally bringing her children to the office with a book or headphones to occupy themselves while she worked, and she felt that her advisor was understanding when the children were present. The Ph.D. students with toddlers and preschoolers tried to find other solutions because their children were not old enough to occupy themselves. Students who lived on-campus discussed how other parents helped them manage work-family scheduling conflicts that arose. Amelia relied on other mothers who lived nearby to help with transporting her

children to or from school or to stay with them for a couple hours so she could go into the office or attend department events.

Another approach to managing role conflict is to be selective about what opportunities to participate in. For Emily, "there are definitely meeting and extra stuff, and seminars and classes even, that I would like to take, but that I choose not too take because it would be too much, or it's at the wrong time, or that kind of thing." Similarly, Abigail reflected on opportunities "that would be so fascinating and if I were here more I could take advantage more, but reality is very different and if it was ten or fifteen years ago I'd have a lot more energy for these things." Harper found the social sacrifices to be particularly challenging: "What's really hard is I cannot develop the kinds of connections that the other students can, and that's a loss professionally and that's a loss for me socially." Advisors generally told students when a class or event was of high importance so students could prioritize their time and energy. When last minute conflicts occurred, students felt that their advisors were understanding as long as it did not happen too frequently.

Students also described benefits to balancing multiple roles, with advisors playing an important role in the student's ability to juggle those roles. They drew attention to the fact that every parent and every Ph.D. student has challenging experiences, these students just happened to be combing the two. They found ways to prioritize and make efficient use of their limited time. Having a family provided an opportunity to step away from their research and focus on what is really important to them. For parents with school-aged children, they hoped they were acting as a role model to their children. Despite some

challenges in her advising experience, Harper knew that her Ph.D. experiences were learning opportunities for her daughter:

> She takes an empowered role in her own schooling that I think she gets from seeing how I've had to say, "No, that advisory relationship is not working out. I have to change." She's seen me be a student in ways that then she can emulate and try on her own. So I think those are really rewarding.

Amelia viewed parenting in academia as an opportunity to find a space away from her studies to reevaluate what really matters to her. "You get mired in the subject matter and lost in your thoughts. I think having the kids really brings me out of that every single day, many times a day." She also described how she reassessed her values and coping techniques:

> It was a great opportunity to think about my values and what is really most important to me. One of the values I realized that I haven't been using at all since I've been here is helping people. Then I realized that I have these kids who constantly need my help…It's like these are real people, real problems that I can usually fix.

Several interviewees discussed negative and hostile interactions that were directly related to the research opportunities, funding, and interpersonal dynamics. Abigail described the power dynamics that can exacerbate a challenging advising relationship:

> I've worked with difficult personalities in the past and I've been able to handle it. When you come in as a grad student there's a totally different power dynamic that I wasn't really aware of. I had heard about but didn't really understand until I was in it. This person has complete power over me; I can't stand up to him or

> stand up for my rights. The only way I could do it is to walk away and go work with someone else. I just haven't seen how that makes sense for me because my research is just so directly related to his.

In these situations, students were left with limited options to attempt to improve or stabilize the advising relationship. They typically reached out to staff, other members of their committee, or the department chair, with mixed results. The faculty advisor plays such a significant role in funding and professional opportunities that the student's Ph.D. career is in jeopardy if they cannot repair the advising relationship or find a new advisor. In small departments and programs, it may be particularly challenging to find another advisor with similar research interests.

Socialization to the department/discipline

For some students, there were unspoken norms within their department regarding parenting during graduate school. Department and research group culture shapes student experiences, and some students received messaging that parenting was in conflict with being successful in a Ph.D. program.

> Emma described the experience of parenting in academia as: nobody says anything bad, but that doesn't mean that everyone thinks it's good… But just that it's not socially acceptable to tell people it's a bad idea… I just feel like there certainly are people, faculty who mentor and advise students who I think give different types of opportunities depending on what your status is. And certainly when you're pregnant during a program versus coming in with kids already. There's less potential to hide your family status when you're walking around eight months pregnant, which is something I feel like happened to me. Not my

> advisor in particular, but I definitely did say, 'I'd like to start working on this project' and he was like, 'Hmm, you're going to have a baby this summer. Let's chat again and see where you're at.'

Similarly, when Olivia moved her field season up to accommodate for her pregnancy, her advisor and research committee were excited for her. But when she returned to campus, other department members voiced their concern: "I did hear later that people were concerned that I was going while pregnant. They didn't say that to me before I left. They said it to me afterwards."

> Olivia described the informal department culture around parenting as: Usually, first thing in a meeting is, "How's the kid?" They want to know. So there is a positive enthusiasm for having kids. So that's been positive, but… I feel the enthusiasm for having kids is… kind of extends to it will have no impact on your work or tie to the department… I'm not sure what would happen if I said, "I can't do that because of my kid."

Even in programs where the culture appeared to support children and parenting, there were limits on when and where it was acceptable to merge the parenting and student role. These boundaries were not always clearly defined.

> Isabella described conversations she had with other students: Me and some of the other mom's have talked about, when we had babies. Can we bring babies to meetings? Can we bring babies to talks? I did it once or twice and I feel really uncomfortable doing it, because I feel like people are like, "Oh, she's not taking her work seriously." On the other hand, I want to do it because I want to make a statement that I can do serious work. So that's a constant dilemma that I have. I

> feel like I could bring my baby to a meeting with my advisor, whereas one time I brought a baby to a big group thing and I was really self-conscious about it.

Emma, Isabella, Sophia, Amelia, and Abigail all mentioned times that they brought their child(ren) to department functions. In each case their advisor appeared supportive or neutral. Harper used teleconferencing to meet with her advisor and other department members, and her daughter frequently came into the room to say "hello" during their meetings.

In other departments, there was limited or no precedent for parenting during a Ph.D. program. For Sophia's department, "it's the culture that there aren't any parents…so once everyone doesn't have any constraints, I feel like I have to measure up."

> Sophia felt the need to prove that motherhood would not hold her back: For me it was really important that the kids would not… I should say that being a mom would not hold me off for being promoted or for being assumed productive. So I was always trying to be the super student. And for example, when I was on maternity leave with my daughter, I would come to lab for two hours a week to mentor a rotation student. So I was really working hard not to let that be a setback, but it may have played a part in how people treated me.

Sophia's advisor never placed expectations for her to work that soon after having a baby, but she felt internal pressure to exceed her own expectations. She also believed that high-paced work environments in local (off-campus) companies drove expectations. Her particular department had ties to local technology companies where it is common for one parent to stay home with the children while the other is able to work long hours.

Advising groups with a history of parents may encourage students to start families. This was the case for Mia, who stated, "perhaps one of the reasons I chose to have a child during graduate school is that there has been a lot of precedence for parenting and research in our lab." However, she also discovered that there were different expectations for Ph.D. students and postdoctoral scholars or staff researchers. In her research group some postdoctoral scholars or staff researchers previously took very extended leaves (up to one year) or moved to part-time status. Mia was the first student in the group to start a family and when she told her advisor about her pregnancy, the response was: "Congratulations, that's a great life choice, but…" Mia feels her advisor was concerned about how a family would impact her graduate career because other scholar-parents had taken extended time off or reduced their workloads. Other department members asked her if she would continue the Ph.D. program after maternity leave.

Ava described the experience of parenting in graduate school as "alienating" because "you just feel kind of alone." She highlighted that being a Ph.D. student with children can be even more isolating in certain disciplines and departments. In her case, there were very few women in her department and very few students with children. She did not have a knowledgeable or caring advisor to support her, so she found a competent support network and information elsewhere on campus.

Research question three: What mentoring behaviors and practices assist or hinder female Ph.D. students in balancing family and academic obligations?

This research question explored themes of mentoring experiences students had with their faculty advisor. The emergent themes were identified from interview responses and guided by Tronto's (1993) elements of an ethic of care.

Definition of mentorship

Students felt their advisor served as mentors when they provided career guidance, professional growth, and were generally supportive and encouraging of their student's personal and academic interests. Ava described a mentor as, "someone who cares about you and who will check in on you on a regular basis." Isabella said her advisor serves as mentor because they "have a really informal relationship." She felt comfortable emailing him for advice and feedback and he provided support and guidance for her professional growth. According to Sophia, "a mentor is a more holistic view about the circumstances." Harper viewed mentoring as "how you engage with the work and who you are in relationship to the work." To her, mentoring activities included recommending professional conferences to attend, introducing students to other scholars, and more personal aspects like providing advice and guidance in decision making.

Mia had a "fantastic mentor" as an undergraduate, and entered the Ph.D. program expecting a similar experience. She defines a mentor as "someone who displays qualities that I want to emulate, either in terms of their writing ability, their scientific process, how they manage a group, and their ability to guide their students towards whatever aspect they want to learn from that individual."

Responsive to student needs and interests

For students who described their advisor as a mentor, it was clear that their advisor was attentive and responsive to the need for care. Effective mentors were aware of the challenges graduate students face and how students' personal lives add to those challenges. The mentors focused on their student's needs and were aware that care needed to be provided. When Sophia's research mentor asked her about balancing kids and work, that awareness that she balances these roles was an unexpected and unique interaction. Sophia stated, "I really tried not to show I'm a parent at many circumstances," so her mentor's question demonstrated an attentiveness to her holistic needs and experiences.

Mentorship, care, and attentiveness varies by context and culture. Mia recognized that her advisor was aware and happy for her advisee "in her own way", but that the advisor "is very Scandinavian and seems very stoic" in how she expresses her care and interest.

Some students preferred to keep their advising interactions focused only on their research and academic work, while others desired some form of connection and acknowledgement that they had a personal life outside of their student role. Abigail explained it as, "just at a personal level you're looking for some connection or empathy." Individual personalities impacted the level of connection, as several students noted that their advisor did not have "that type of personality" or they "cared in their own way."

Ava did not feel that either her current advisor or former advisor were interested in her personal life.

> She stated: They aren't interested in your personal life based on how I perceive them, because it doesn't matter what's going on in your personal life. You get your work done. Yeah, they were nice. They would be nice if you let them know that you got married and you have a kid, but I don't think they really care.

From student interviews, it appears that faculty generally understood the advising responsibilities that come with serving as a Ph.D. student's advisor. Those faculty who acted as mentors were more likely to display caring responsibilities. From the students' perspectives, mentors demonstrated that their advising responsibility extended beyond simply course advising and milestones, but to a responsibility to prepare the student socially and professionally for their discipline and career and to care about their advisee as a person.

Sophia drew attention to cultural difference around parenting and how that affects advisors' understanding and expectations. The student and her advisor were from the same country, and she described how expectations differ from the United States:

> I think he understands that people have families and he's for families. He has a family now, and he's also [from my home country]. So it's just family values are…and having kids is something that you do. It's obvious that a woman has kids around 30 years old, so it was never an issue.

Students enter and re-enter Ph.D. programs at different stages, and they may have different needs and expectations when they return from a leave of absence. When Mia returned to her Ph.D. program and found a faculty member to serve as her advisor, that new advisor was attentive to Mia's needs and interests in finish the program as quickly as possible. Her advisor took responsibility for working with Mia to find ways to shorten

her time to degree and how to revise project, funding, and publication expectations to both provide a valuable learning experience but also allow the student to finish in a reasonable timeline. “Some of those conversations were renegotiated, but overall we did discuss them and continue to update them.”

Finances and knowledge of campus resources were frequently identified as areas where faculty advisors were lacking competence and awareness to support student needs. Faculty advisors were not knowledgeable about available resources or policies, or what information was available for pregnant and parenting students. Every interviewee commented that the University has very limited resources and services for parents, but faculty and staff do not appear to be knowledgeable about even those limited opportunities. Emma noted that her advisor “was very supportive but definitely not knowledgeable of official policies.” Emily also described her advisor as “hugely supportive, but not knowledgeable.” For parents like Olivia, who lived off-campus, faculty had even less knowledge about resources.

Preparing for life after the Ph.D.

Students hoped their faculty advisors would provide professional development opportunities, not only with funding and research guidance, but also in understanding the expectations and norms of the discipline and job market. When Isabella was planning a conference session, she turned to her advisor for guidance. He dedicated a significant amount of time to helping her plan the session and identify some key participants. He was knowledgeable about the discipline and experts and was able to use his knowledge of research areas and interpersonal dynamics between researchers to help Isabella prepare a productive and successful session.

Similarly, Sophia's advisor had the time, patience, and knowledge to guide Sophia through presenting and publishing research for the fist time. She described his effectiveness at explaining "what reviewers want to see, how to strategize submitting to journals…even just understanding how to do coherent and bulletproof research, that was helpful."

As students progressed through their academic career and prepared for the job market, they expected to receive some guidance on networking, job applications, and life after graduate school. Emma believed her advisor was "pretty typical" because he sent job postings and provided feedback to tailor her publications based on when she would start applying for jobs. Unfortunately, not all students received this level of support from their advisor. Ava stated that her professional development and guidance primarily came from her peer network and campus resources, but her advisor "was willing to write a letter of recommendation for the postdoc application."

Emma felt their advisor provided professional guidance by making students aware of funding opportunities, conferences, and "lower stake opportunities" for students to practice applying for grants. Isabella discussed how supportive her advisor is with connecting her to a network and preparing her for professional opportunities not only by providing research advice, but also guidance about the informal norms and expectations within the discipline.

Providing productive learning opportunities and constrictive feedback provides training and confidence for Ph.D. students as they prepare to transition from a student to a scholar. Amelia's believed her positive advising relationship and shared research

interests contributed to the professional opportunities available through her advisor and her advisor's professional connections.

> She's very supportive of pretty much all of my ideas…she gives very directed feedback. She just does it in a way that's easy to receive. She's very interested in the same stuff that I'm interested in or I'm interested in stuff she's interested in. She puts me on projects that are prominent. She's given me opportunities; they're good opportunities.

Some advisors helped prepare their advisees for life after the Ph.D. by modeling work-life balance. When students saw faculty members "doing it all" by maintaining successful academic careers and families, it provided encouragement for the students.

Recognizing and engaging in work-life conversations

In a mentoring role, responsive faculty advisors understood and empathized with their advisees experience and perspective. Parenting was a significant component of these students' Ph.D. experience, and the majority of the study participants wanted their advisor to have some level of interest and understanding in how students managed both roles. Responsive advisors did not assume their student would have a Ph.D. experience identical to their own, and responsive faculty who are also parents did not assume all parenting journeys are the same. They made accommodations, provided care, and engaged in conversations in a manner that met their student's needs and level of comfort.

Sophia described an interaction with one of her dissertation committee members who she considered to be a mentor. "He also asked me personally how I balance kids and work, which no one else asked me." She also said, "I tend not to talk about my kids and I

tend to not make it a major issue when people see me." So it was impactful to her that her mentor recognized her parenting role and took the time to ask her about it.

A frequent conflict for the students with young children was how to manage childcare. Students were returning to their research and courses as soon as eight weeks of giving birth, and did not always have childcare available that early. When Emma was searching for daycare, her advisor was flexible scheduling their meetings around Emma's needs. Her advisor would relate to her experience by letting her know, "I know how hard it can be to switch gears, I remember that being a problem. Like I'd be doing nursery rhymes and then I'd need to sit down and completely shift my mindset." Rather than telling Emma how to balance those roles or assuming she would have the same experience, he asked how he could help in the transition and what schedule would help her balance childcare and academia.

For Olivia, one of her dissertation committee members was also a mother, but her approach for providing support was to view conflicts from her own personal experience. The committee member had her children in on-campus child care. Olivia lived away from campus and found childcare close to home, at a more affordable rate. Olivia appreciated that the committee member had experience as a mother in academia, but the committee member did not always realize that graduate students experiences differ from some faculty experiences. Olivia stated, "She does know what it's like to be a woman with children going into the field. She often asks me about my daycare situation then tells me it's no good, I should get something better."

When Isabella was having difficulty getting pregnant, she felt comfortable going to her advisor to let her know what was going on in her personal life and that she would

miss some meetings due to appointments. She described the interaction as "super understanding" because he told her, "This is a priority. Do not feel bad. Do not apologize. Just do what you need to do to take care of yourself."

Caring mentors can understand what values are important to their advisee, even if those particular values are not a significant priority to the advisor. For Amelia, her children are clearly very important and she finds creative ways to balance conflicting demands, sometimes bringing her children to the office. She says her advisor is "not at all interested in kids…she's a very warm person, but she's just not interested in kids. She's met them and she's just not that interested." The advisor may not go out of her way to connect with the children, but she is friendly towards the children and generally understanding of Amelia's need to balance work and family obligations.

By simply checking in with students about life events and gauging how students managed stress and conflict, faculty could impact student success and validate student choices.

> Emily discussed how her advisor was: "incredibly supportive when talking about childbirth accommodation. Just really, in that conversation, went out of his way to make it clear that he wanted me to balance things the way that felt right to me, and not to rush. That actually made a huge impact on me deciding to stay with the lab. Both because I think that having an advisor who is understanding, the fact that I have this life going on… a life going on that I'm just not willing to cut into as much as maybe graduate students who can stay all night rushing for a deadline. I can't, I have to be back for bedtime and stuff."

Summary of Major Findings

Student's expectations of advising relationships were primarily focused on communication, funding, professional development, and recognition that students also have personal lives. Interview responses indicated that student expectations and satisfaction may change as the student progresses through their Ph.D. program. Early in a Ph.D. student's career, they expect more frequent communication and one-on-one support from their advisor. Later in their Ph.D. career, student may not require or desire as much hands-on interaction with their advisor. Students expected advisors to assist in not only their academic growth, but also in their professional development as students moved towards degree completion.

Financial support was a significant concern and expectation for female Ph.D. students with children. Students depended on their advisors to fund the majority, or all, of their Ph.D. program costs along with a living stipend/salary. Students expected transparency from their advisors and departments regarding how long funding would last and requirements for continued funding. For students with a children and families to support, funding was especially important for covering childcare and living expenses.

Students find a variety of ways to balance their academic and family obligations. Some choose to be very open about their family to their advisor, others prefer separate the two and avoid drawing attention to their parenting role. However, there was a common theme that students appreciate when advisors acknowledge that students are living complicated and busy lives beyond their Ph.D. role.

Overall the interviewees were satisfied with their advising relationship and felt their expectations had been met. Some decided that while some of their needs were not

met, the experience was "good enough" overall. For a few students, their advising relationship did not meet their expectations and their advisor's actions were causing harm or not meeting the student's needs.

When asked to distinguish between advising and mentoring, students define advising as being task oriented, focused on the research and getting through the program, and professional. Mentorship expands those responsibilities to caring about the student holistically, providing guidance, serving as a role model, connecting students to a professional network, and generally being interested in the student and their interests.

Advising factors that impacted the experiences of Ph.D. students with children included advisor fit, role conflict, and department culture. Students with a poor advising fit were dissatisfied with their advising relationship and Ph.D. experience. Some were able to change advisors and had a more favorable experience with a new advisor. Similar research interests were a common occurrence among students who reported a good advising fit. When students were faced with conflict between their parenting and student roles, they had to make choices on how to resolve the conflict. Sometimes that involved bringing children to department events, other times it required missing department or academic opportunities. Students were aware of how their advisors responded to these choices, even if the reaction was subtle. Similarly, department culture surrounding children and parenting had an impact on the student experience.

Insights into the mentoring relationship found that students who were very satisfied with their mentoring experience likely had advisors who displayed all of Tronto's (1993) elements of an ethic of care. Advisors who demonstrated caring activities recognized the need for care, took responsibility for providing care, were competent in

providing care resources, and were able to understand caring needs from the student's perspective. One challenge to competence was the limited funding and support services available university-wide to students with children.

Overall, student interviews reported positive or neutral advising and mentoring experiences. The following chapter presents a discussion and conclusion of the findings, implications for these findings, and recommendations for future research and application to professional practice.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion of the Findings

The purpose of this study was to explore the academic advising and mentoring experiences of female Ph.D. students with children. Through a qualitative research approach, data were collected through interviews with ten students. Tronto's (1993) elements of an ethic of care guided emergent themes from the data analysis. Further discussion of the research questions, conclusions, implications, and recommendations for future research and professional practice are below.

The first and second themes that emerged were about students' initial expectations of an advising relationship and how those expectations changed as students move through the Ph.D. program. Students were asked about their expectations going into the advising relationship and about any meetings they may have had with their advisor to discuss expectations. The most common expectations were related to communication, accessibility, timeliness of feedback, knowledge of degree requirements, and professional guidance

Similar to findings in Barnes et al. (2010) and Golde's (2000) studies on advising behaviors, students in this study placed high importance on their advisor's accessibility, availability, and quality of communication. Students expected their advisors to be available to meet, provide timely and helpful responses, and provide flexibility in the frequency and style of communication based on the student's needs and stage in their Ph.D. program. Quality of interactions was more important to students than the quantity or frequency. The students expected constructive feedback, suggestions for next steps,

timely responses, and a communication style that indicated a sense of care and understanding about the student and their needs. Students who lived and worked remotely hoped for less frequent on-campus meetings and more flexibility around telecommuting, phone calls, or text messaging. Students also expected that their advisors would place importance on their interactions rather than seeing advising and research meetings as a task on a to-do list.

Students' expectations of their advisors indicated that they hoped their advisor cared about the student and the advising relationship. Participants assumed that by being selected for the Ph.D. program, their advisor and/or the department took responsibility for guiding the student through the Ph.D. program and meeting basic advising needs, which represents Tronto's (1993) element of responsibility.

One of the factors that changed the dynamics of an advising relationship was when an advisor's increasing obligations to the university or other professional opportunities impacted their availability to advisees. Tronto (1993) described attentiveness as not only recognizing the needs of others, but also being attentive to one's own need for care as a precursor for being able to provide care to others. For faculty advisors to recognize a student's need for care and provide that care, they must first recognize their own need for care. In academia, faculty members are encouraged to take on committee roles and other leadership opportunities, in addition to teaching, research, and advising. While this particular study looks at the student experience, it is important to consider the care and support required by faculty to support their ability to provide care to their own students.

The third theme was funding transparency and availability. Sufficient financial support was expected to help students focus on their research and make timely academic progress. Brown and Nichols (2012) and Springer et al. (2009) found lack of financial support to be a structural barrier that impacted Ph.D. mothers' abilities to balance family and their academic interests. Students in this study received tuition and either salary or stipend from their advisors or departments, or from university awards. While all of the participants had spouses providing the majority of their household income, the students' funding was important for avoiding or minimizing student loan debt and for covering some of their basic childcare and living expenses. Each of the students had worked full-time prior to starting their Ph.D. program, so entering the Ph.D. program was an income loss for their family. Students provided insight to the interconnectedness of student status and eligibility for funding, housing, health insurance, and related resources. They hoped that faculty and staff understood how losing funding or taking a leave of absence when funding expired meant that other resources are also forfeited.

The fourth theme was maintaining a high level of professionalism. Similar or complimentary research interests were an important aspect of a successful advising relationship. Students whose interests did not match those of their advisor had challenges receiving adequate support and resources. Successful advising relationships also relied on pairings where the advisor and advisee communicate well and work well together on a professional and social level. In cases of poor advising fit, participants expected a high level of professionalism from their advisors as they determined whether the relationship was salvageable or if the student needed to find a new advisor.

When students perceived their advisor as being harmful, hostile, or disinterested, academic progress and the student's self-perception suffered. Barnes et al.'s (2010) findings were confirmed by some of the students in this study. Advising behaviors affect how the student perceived their advisor, but also their overall Ph.D. experience. When students felt negatively impacted by their advisor's behaviors, they considered leaving the program, questioned their own abilities, believed their progress to degree would be impacted, and they felt neglected by the department or university for allowing negative advising behaviors to continue.

A fifth theme looked at how students defined advising. In line with Nettles and Millett's (2006) description of the advisor role, study participants defined academic advising as neutral, professional, task oriented, and focused on the research, not personal concerns.

Theme six was the quality of advising support. As students balanced their parenting and student roles, they hoped their advisors would demonstrate some level of care about the student's life outside of the classroom or research group. This supports findings from Barnes et al. (2010) and Golde's (2000) studies on advising behaviors and student attrition. Students wanted to decide how much personal information they shared, but they expected their advisors to understand that students have personal lives and that challenges are associated with navigating multiple roles. If advisors did not show an interest in the student as a person outside of their research, that advising relationship could be damaged. If faculty advisors put students in a position where they must choose between the needs of their family and the demands of the Ph.D. program, academic progress and student satisfaction could suffer.

The seventh theme was conflict management. Students in this study reported similar work-family conflicts and resolutions as found in previous studies by Brus (2006), Gardner (2008), Lynch (2008), and Masi de Casanova et al. (2013). Childcare, scheduling conflicts, sick children, limited lab time, and lab hazards were some of the concerns that Ph.D. mothers encountered. To resolve conflicts between their parenting and student roles, students relied on their support networks to care for their children, chose not to attend certain activities, or they found ways to include their children in their academic environment. Support networks included spouses, family members, friends, and neighbors for students who lived on-campus.

In some situations, students chose not to participate in department functions that conflicted with their family's needs. In other cases, they brought their child with them to office hours, meetings, and speaker events. When students considered how to resolve conflicts, they often thought about how their advisor would react. Supporting Brus' (2006) findings, students appreciated when their advisor either supported or did not comment on how the student chose to resolve the conflict. Students did not always expect their advisor to vocally support their decision, as long as the student did not feel that they had to hide their parenting reality from their advisor.

Theme eight was Ph.D. student socialization to the department and discipline. A faculty advisor's attitude and behavior towards work-family balance expanded to department and research group culture. Students were acutely aware of being one of very few parents in their department, or even the only one. Students experienced Weidman et al.'s (2001) informal stage of socialization and Golde's (1998) fourth task of graduate student socialization ("Do I belong here?) as they learned the informal expectations and

norms of their department and research group. In this stage of socialization, students gained a sense of how acceptable it was to discuss family with their peers and faculty members, what settings were appropriate for family, and if others perceived parenting to be a factor in a student's productivity and academic success.

Corresponding with Gardner's (2008) work on the experiences of graduate student mothers, some students in this study reported feelings of isolation because they were not a "typical" graduate student. Some students believed they had different priorities, which made it challenging to relate to their student peers and may have made them less desirable research assistants compared to students who could work late hours. However, some of the students felt that their age was more of a factor in the isolation from their student peers. In some departments, participants found peer support and community with postdoctoral scholars and staff researchers who also had families and were older than the typical graduate students. There were a few students in the study that did not report any feelings of isolation or lack of integration due to their parenting role. Positive and negative socialization experiences were not limited to particular disciplines, despite findings from Sallee (2011) and Mason et al.'s (2013) work on gendered socialization in STEM fields.

The ninth theme was how participants defined Ph.D. mentoring. In agreement with the work of Nettles and Millett (2006) and Lundsford (2012), students in this survey described mentoring as a deeper relationship than advising. Mentors demonstrated care for the student holistically and had a personal interest in a student's professional development and emotional well-being. As noted by Schlosser et al. (2003), mentoring is a generally a positive relationship. Behaviors and practices that hindered students' ability

to balance obligations were still attempts at caring and supporting the student; they just may not have been what the student needed at that exact point in time.

Theme ten was responsiveness to student needs and interests. Each faculty advisor demonstrated some level of care and responsiveness towards their student's needs. Those needs and expectations evolved as students and faculty progressed in their careers. When advisors did not adjust their expectations and assistance to meet those changing needs, there was conflict in the relationship. When faculty advisors took on additional responsibilities, advising relationships changed. Some advisors were still able to provide adequate care to their advisee, while others could not. Needs and expectations also changed when Ph.D. students started families. In situations where the advisor was unable to be responsive to the student's changing needs and obligations, some of Tronto and Fischer's (1990) phases of caring could not occur.

Students felt supported and cared for because they believed their advisor understood their struggles and gave them the guidance or space to successfully balance parenting and academia. Mentors demonstrated competence in providing financial resources, personal expertise, time, and energy to understand and meet the needs of their advisees. One limitation was the lack of knowledge about campus resources and services for student parents. Advisors were not knowledgeable about campus services and policies; some did not know where to direct students to find the information. Some did not now how to adequately assist there students simply because the resources did not exist at the university. This draws attention to the limited services that are available and the lack of education for faculty about the few resources that do exist. Responsive mentors made an effort to understand their student's experience for the student's

perspective. When mentors were interested in the student as a whole-person, students felt supported in their decisions and felt better equipped to balance conflicting roles.

Theme eleven was preparing for life after the Ph.D. Students expected professional guidance from their faculty advisor. For some students, this fell under their definition of mentoring, for others they saw this as an essential function of advising in a Ph.D. program. Two of Weidman et al.'s (2001) key elements to graduate student socialization are investment to the profession and involvement, including interacting with experts and well-established professionals in the field. Professional guidance and professional opportunities from faculty advisors are critical for successful socialization and future success in a Ph.D. student's chosen discipline and career.

Students also appreciated when advisors could speak positively to their own experiences as parents in academia. For some students, their advisor's experience as a parent or understanding of the challenges facing student parents contributed to the decision to join the research group and their overall satisfaction with their advising relationship and Ph.D. experience. Faculty member's experiences as parent-scholars helped students believe that they could also lead successful careers while parenting.

The twelfth theme was recognizing and engaging in work-life conversations. Participants discussed the individual challenges associated with being a Ph.D. student and the individual challenges associated with parenting, along with the unique experience of combining the two roles. It is impossible to separate their two identities and how those roles interact and impact each other. Students appreciated having conversations about their family and personal lives. Some chose to share more information with their advisors, while others preferred to keep the relationship focused on the research and

academics. For those students who preferred to focus on the professional aspects of the advising relationship, they still noticed and appreciated when faculty members briefly asked about their families and children. Students guided those conversations and set boundaries on how much information they were willing to share.

Knowing their advisor cared enough to check in was beneficial to the student's well-being and perception of the advising relationship. For student who decided to share personal information and challenges with their advisor, they felt those conversations helped with the postpartum transition as students learned how to balance their roles and address child care and time management concerns. For students who preferred to limit the amount of personal information shared with faculty, the knowledge that their advisor would be open to conversations was encouraging.

Engaging in work-life conversations also created an opportunity for advisors to serve as mentors and model work-life balance in academia. These conversations were a way for faculty to demonstrate elements of care as they were attentive to their students multiple needs, responsible for providing care even as those needs changed, devoted the time and energy towards reaching out and engaging in conversations, and were responsive to the student's individual and specific needs. Particularly with the element of responsiveness, parents frequently receive unsolicited advice from family and strangers. Students preferred when advisors were genuinely interested in their advisees needs and challenges rather than expecting that their advisee's parenting and student journey was identical to their own.

I did expect to find a more negative advising experiences in the STEM interviews, due to the underrepresentation of women in the faculty and student population, along

with the reputation that STEM fields are rigid and expect many hours in the lab or office. I was pleasantly surprised to hear mostly positive advising relationships among the engineering and science participants. The social science students also reported some negative experiences. One thing that stood out is the recognition that some social science advisors knew that they should not make certain comments regarding parenting and pregnancy, but their opinions were still very apparent to their advisees. This calls into question the assumption that social science departments may be more family-friendly than STEM departments. This assumption may be based in part on some faculty members' desire and ability to appear to conform to expectations regarding appropriate behavior, more than truly embracing a caring attitude toward student parents.

Range of advising/mentoring behaviors

Study participants described a range of advising and mentoring behaviors from their faculty advisors. Elements of Tronto's (1993) ethic of care were described by each of the participants. Faculty who demonstrated all four elements (attentiveness, responsibility, competence, and responsiveness) and Tronto and Fischer's (1990) phases of caring (caring about, taking care of, caregiving, and care-receiving) were typically viewed as mentors by the study participants. Faculty who acted primarily as academic advisors and not mentors could still demonstrate some aspects of care. The range of advising behaviors and caring behaviors highlighted several advising styles included toxic advising, neutral advising, and empathetic mentorship.

In an academic advising capacity, advisors displayed some of Tronto's (1993) elements of an ethic of care. Advisors who also acted as mentors demonstrated all four elements of an ethic of care. In cases where students did not consider their faculty

advisors to be mentors, the advisors did still demonstrate some elements of care at various points in the advising relationship. All of the faculty advisors took responsibility for providing some level of academic advising. A few appeared to show attentiveness to their student's needs during the admissions process, but failed to follow through with providing the level of care expected by the advisee. For some students, their advisor was unable to adapt their method of caregiving as personal or professional circumstances changed the advising dynamics.

Tronto and Fischer's (1990) phases of caring were experienced by students who viewed their advisor as mentor. The faculty advisor recognized the need for care, had the resources and skills to take care of the student, and committed to the direct work of caregiving. In these student-advisor mentorship relationships, faculty provided funding, time, compassion, professional expertise, research skills, access to their network, and shared their own personal experiences. Students were open to receiving care and generally responded positively to their advisors genuine caregiving efforts.

Tronto's (1993) elements of ethic of care were also observed in situations where students viewed their advisor as a mentor. Caring mentors demonstrated attentiveness, responsibility, competence, and responsiveness. They were attentive to their students needs, both academically and personally and recognized that students needed care, whether that was providing advice, feedback, or support. When faculty acted as mentors, mentoring was viewed as a responsibility associated with serving as a faculty advisor. The students never had to ask their advisor to be a mentor; mentorship was something their advisor provided spontaneously and willingly. Faculty who served as mentors were competent in providing care.

Neutral advisors engaged in the administrative tasks required of a Ph.D. advisor, including signing off or paperwork, participating in research group meetings, and providing some feedback. They demonstrated Tronto's responsibility in that they felt an obligation to provide a level of academic advising and financial support to the students they admitted to their research group. The advisor was not particularly engaged or interested in the student's research project or personal life. They maintained a professional relationship and did not display harmful behaviors or extremely caring behavior. Neutral advisors were not a hindrance to their student's success, but they also did not go out of their way to provide meaningful engagement or growth opportunities.

Toxic advisors were roadblocks to a student's success. These advisors neglected to respond or provide feedback on student work, delayed milestones, had unrealistic expectations, micromanaged, did not maintain consistent expectations within the research group, or made harmful and mean-spirited comments about their student's work and/or personal life. Very few aspects of care were identified by the advisees. Students typically expected "normal" advising relationships upon entry to the program, and later discovered that their advisor's actions and attitude did not match the conversations that occurred at the time of recruitment, admission, and matriculation. Poor advising fit does not explain toxic advising behavior, as many faculty and students do maintain healthy professional relationships even in cases of poor fit.

Empathetic mentors genuinely cared about their student's needs and well-being. The level of care extended beyond their research or lab environment as the advisor supported the student's holistic experience as a student, a parent, and an individual with their own unique goals and interests. Mentors were not taught empathy, it is something

that came naturally to them as they acted with compassion, concern, and responsibility for their advisee's overall success and well-being. Empathetic mentors understood the perspectives and needs of their student and tailored the advising and mentoring experience towards the individual needs of a particular student. They supported their student's personal and family needs while still maintaining a rigorous and challenging academic and research experience.

Conclusions

This study contributed to the body of research by providing insights to the academic advising and mentoring expectations and experiences of female Ph.D. students with children. As outlined in socialization, advising, and mentoring literature, faculty advisors had a significant role in how Ph.D. students were socialized to their discipline and department, how they experienced graduate school, and the student's academic and professional success.

The experiences reported in this study highlight how faculty positively and negatively impact Ph.D. students with children. Specifically, insights were provided regarding student's expectations, student's perceptions of advising behaviors and practices, and student's perceptions of mentoring behaviors and practices. Interview responses indicated that student expectations, needs, and satisfaction may change as the student progresses through their Ph.D. program.

In caring mentoring relationships, advisors adapted their care and support as students progressed through the program and as professional and personal circumstances changed. The students who viewed their faculty advisor as a mentor and reported satisfaction with their advising relationship reported examples of all four of Tronto's

(1993) elements of an ethic of care and all four phases of Tronto and Fisher's (1990) phases of caring. Mentoring behaviors and practices that helped female Ph.D. students with children balance family and academic obligations included demonstrations of care, showing an interest in both the student's academic and personal life, recognition of the challenges facing students with children, and commitment to the student's professional success.

Some students were satisfied with their advising relationship even if they did not view their advisor as a mentor. If a faculty advisor served only as an academic advisor and did not behave as a mentor, they could still demonstrate multiple elements of care. In situations where the student was not satisfied with the advising relationship fewer elements of care were identified.

Academic advising behaviors and practices that helped female Ph.D. students with children balance family and academics included: advisor fit, flexibility when students did need to change advisors, adequate financial resources, understanding when students needed to be selective about scheduling, and creating a department culture where success in balancing family and academia could be supported or modeled. Academic advising behaviors and practices that hindered the experiences of female Ph.D. students with children included: scarcity of information about maternity policies and family resources, poor communication, hostile communication, lack of flexibility for students with scheduling conflicts, and doubting a student's ability to continue their research while pregnant or parenting.

Recommendations for Future Research

This study was limited to a sample of mothers at a private university and therefore is not representative of all Ph.D. mentoring and advising experiences. Further research on Ph.D. students with children is recommended, including non-birth parents. If colleges and universities are not collecting information on the number of students with children, there is no way to know how many students need support or what type of support is required. Research should also expand to include the experiences of postdoctoral scholars, as several participants in this study referred to interactions between advisors and postdoctoral scholars who were also parents. Many Ph.D. students continue on to postdoctoral positions.

This study did not find significant difference between disciplines, but other researchers have identified discipline-based differences in socialization and advising experiences. Further examination of experiences in broad range of disciplines could further enhance our understanding, especially pertaining to differences in implicit and explicit advising and mentoring expectations and potential biases toward students with children. Future studies could also delve into the various ways parenting and academic stages may or may not interact. Most participants in this study either started their family towards the end of their Ph.D. program or had their first child prior to starting the Ph.D. program. Future work could examine the experience of parents who started their families earlier in their Ph.D. program or parents who had multiple young children close in age during their Ph.D. program. Students parenting multiple toddlers early in their career may have different experiences than a student with a child in elementary school.

The academic and social climate in this study is not representative of all types of institutions and doctoral programs. Students at this institution are primarily trained for careers in academia and industry. Additional research should be conducted about the experiences of other doctoral students, including practitioner based programs (such as the Ed.D.), joint degree programs, and doctoral programs based out of professional schools (such as the Law and Business Ph.D. programs). The experiences of doctoral students at different institutions can further contribute to diversifying our understanding of the topic. Experiences at larger public institutions, liberal arts colleges, different regions of the country, and programs with other funding models will expand our knowledge of student advising and mentoring experiences.

This study does not reflect the diversity of the university where the study was conducted. Further research must be done about the experiences of parents who are students of color, LGBT, single parents, first generation students, international students, and non-traditional aged students. Additional research on advising and mentoring from the faculty perspective needs to be done to provide information on if faculty feel prepared to meet the needs of a diversifying Ph.D. student population. Additional studies should occur to examine how faculty members perceive their advising and mentoring abilities.

Another recommendation for research is to expand the application of ethic of care to higher education. Noddings (1984) popularized the ethic of care in K-12 education and teacher education programs, but lecturers, faculty members, dissertation committee members, and campus administrators are all in positions where they can and should provide care to graduate and undergraduate students inside and outside of classroom environments.

Recommendations for the Profession

Study participants drew attention to some of the opportunities to create family-friendly campus environments. The students were disappointed with the limited campus resources and services for families. A recommendation to colleges and universities is to examine the needs of their student population and consider how to create parent-friendly and family-friendly environments. Sallee et al.'s (2009) work should be continued to examine what progress has occurred in the last decade. This is an important topic of discussion at the university where the study was conducted. Graduate students have been drawing attention to the limited resources, lack of affordable childcare, affordable housing issues, and overall limited understanding of the needs of students with children. Conversations are also occurring at other local institutions.

A recommendation for university administrators and staff is to consider if students and faculty are aware of existing policies and services, and if those resources are being well utilized. The lack of support services impacted how advisors provide adequate advice and guidance, because there was little information available. Additional outreach to faculty and departments should occur to increase awareness of existing resources and to explore partnership opportunities at the department level.

Another recommendation for practice is to review any existing advising and mentoring training that currently occurs on campus and critically examine if those trainings prepare faculty to support students from diverse backgrounds, with diversity broadly defined to include student parents and other demographic categories that fall outside the "typical" graduate student. Practitioners and administrators should consider what incentives are in place to encourage faculty to participate in workshops or

thoughtfully reflect on their advising and mentoring practices. How can administrators collect and incorporate student feedback in advising and mentoring trainings? Department chairs and administrators should also examine their practices for student and faculty reviews to identify and address potential advising issues as early as possible. Students in this study who reported harmful advising relationships felt trapped because they did not know where to go or if their career would be jeopardized. Chairs and administrators should also have a protocol in place to address harmful behaviors so students feel supported if they come forward.

Concluding Thoughts

Faculty advisors serve a crucial role in the experience of Ph.D. students. An advisor is in the position to create a supportive and enriching experience for the student, or they may create a hostile and stressful environment. Experiences in this study ranged from great, to "good enough", to harmful. But these experiences are uniquely understood and evaluated by each student. What one student views as "good enough" could be considered exceptional to another student. Unfortunately, some students' advising experiences met their expectations in part because they had been in such disappointing advising pairings previously. Many students had positive and caring advising relationships, which is promising.

The opportunity to interview students from multiple fields about their experiences was valuable to me as a researcher and practitioner. Some of my initial assumptions about the experiences of Ph.D. mothers and the differences between social sciences and STEM fields were inaccurate. The experiences they shared demonstrate how important

research is to informing practice. The student perspective must be included when designing and implementing programs and policies at universities.

Engaging in this research reminded me of the important work that staff undertake to support students and faculty. While staff may have limited power compared to faculty, an understanding of the advising relationship, student development theory, and campus resources can equip staff to better advise and advocate for their students. Student-facing staff have generally opted into careers that focus on providing care and support, so they are uniquely equipped and may have specific training on understanding student needs and providing support to meet those needs.

However, staff support does not remove a faculty member's obligation to support their Ph.D. advisees. When a faculty member decides to admit a new student to their research group or otherwise agrees to serve as an advisor or mentor, it is reasonable for a student to expect some level of financial, professional, and emotional support and understanding. Ph.D. programs are academically and emotionally challenging, and disconnect from a faculty advisor makes the experience even more difficult. Care and compassion should be the expected norm in any type of personal or professional relationship, including a Ph.D. advising relationship. An ethic of care should be incorporated to a faculty member's teacher, research, and service expectations.

The institution and its leaders have an obligation to model care, shape campus culture, and guide faculty in balancing care with the rigor of an academic job. As faculty balance multiple obligations and the tenure process, it is not a surprise that some do not check in on their students as often or are out of touch with their students' personal lives. It is important to consider faculty wellness as they balance teaching, research, services,

and their own personal lives. As faculty members take on additional obligations and roles on campus, how are they being supported in these transitions so that they are able to care for themselves and their students which also contributing to their department and university?

On a personal note, the experience of talking with Ph.D. students with children about their academic career allowed me to reflect on how I have attempted to balance my doctoral program and family. Being a student is challenging, and being a parent is challenging, and we all flounder at times. Having a support network on and off-campus can make all the difference, as even the smallest acknowledgement or encouragement can be so impactful when a student or parent is struggling. I was particularly moved by how some of the students reframed their daily parenting challenges as positive opportunities to reconnect with their children after a busy day in the office or lab. This caused me to reflect on how my children are experiencing my doctoral program and career and how I hope this venture positively impacts my family.

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APPENDIX A

IRB Approval Notification

UNIVERSITY OF SAN FRANCISCO

IRBPHS - Approval Notification

To: Alyssa Ferree
From: Terence Patterson, IRB Chair
Subject: Protocol #817
Date: 04/20/2017

The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at the University of San Francisco (USF) has reviewed your request for human subjects approval regarding your study.

Your research (IRB Protocol **#817**) with the project title **Mentoring and academic advising experiences of female doctoral students with children** has been approved by the IRB Chair under the rules for expedited review on **04/20/2017**.

Any modifications, adverse reactions or complications must be reported using a modification application to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS via email at IRBPHS@usfca.edu. Please include the Protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Terence Patterson, EdD, ABPP
Professor & Chair, Institutional Review Board for the Protection of Human Subjects
University of San Francisco
irbphs@usfca.edu
USF IRBPHS Website

APPENDIX B

Letter to Participants

Dear Ph.D. Student:

My name is Alyssa Ferree and I am a graduate student at the University of San Francisco, in the School of Education. I am conducting a study on the academic advising and mentoring experiences of female Ph.D. students with children.

I am seeking female Ph.D. students with children to be interviewed by me for this project. To participate in this research study you must:

- be currently enrolled in a Ph.D. program at XXXXXX University
- be a mother to a child in elementary school or younger
- have completed at least one year (three academic quarters, excluding summer) in the Ph.D. program

Total time commitment for this research study is approximately one to two hours including an audio recorded interview and optional review of the transcript. There will be no cost to you for participating in the research project. Participation is completely voluntary. You are free to withdraw from the study at any point. Upon completion of the interview you will be offered a $10 gift card for an on-campus establishment.

This research will be used for my dissertation project. I will be writing about what I learn about academic advising and mentoring experiences of female Ph.D. students with children. Pseudonyms will be used to protect confidentiality, including during the use of direct quotes from interviews. Student identities will not be used in any publications or reports from this research study.

If you are interested in being interviewed, please click on the link below to provide some brief demographic information. Participants will be selected from all who respond to this email and meet the criteria for the study. If you have any questions, please contact me at xxxxxxx@xxxxxx.edu.

Sincerely,
Alyssa Ferree, Graduate Student, University of San Francisco

APPENDIX C

Demographic Questions for Interview Screening

1. Do you identify as female?
   - Yes
   - No

2. Do you have children?
   - Yes
   - No

3. What are the age(s) of your child(ren)?

4. Are you currently enrolled in a Ph.D. program at XXXXXX University?
   - Yes
   - No

5. What is your area of study?
   - Science
   - Humanities
   - Social Science
   - Engineering
   - Education
   - Business
   - Law
   - Medicine

6. How many years have you completed in your Ph.D. program?
   - Less than one year (less than three academic quarters)
   - One year (at least three academic quarters, excluding summer)
   - Two years
   - Three years
   - Four years
   - Five or more years

7. How long have you been advised by your current faculty advisor?

8. Have you ever changed faculty advisors during your current Ph.D. program?
   - Yes
   - No

9. How old are you?

10. Please indicate your race/ethnicity (you may select more than one)
    - White

- Black or African American
- Asian
- Hispanic/Latino
- Native American/Alaska Native
- Hawaiian/Pacific Islander
- Other

APPENDIX D

Consent Form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY:
Below is a description of the research procedures and an explanation of your rights as a research participant. You should read this information carefully. If you agree to participate, you will sign in the space provided to indicate that you have read and understand the information on this consent form. You are entitled to and will receive a copy of this form.

You have been asked to participate in a research study conducted by Alyssa Ferree, a graduate student in the School of Education at the University of San Francisco. The faculty supervisor for this study is Dr. Patricia Mitchell, a professor in the School of Education at the University of San Francisco.

WHT THE STUDY IS ABOUT:
The purpose of this study is to explore the academic advising and mentoring experiences of female Ph.D. students with children elementary school-aged and younger.

WHAT I WILL ASK YOU TO DO:
During the study, you will be audio recorded by Alyssa Ferree during an in-person interview in which you will be asked about your academic advising and mentoring experiences and perceptions as a Ph.D. student with children. A follow-up interview may be requested to expand on or clarify information collected during the first interview. After interviews are completed, you will be offered an opportunity to review the written transcriptions for accuracy.

DURATION AND LOCATION OF THE STUDY:
Your participation in the study will involve one in-person interviews. The interview will be approximately one hour. Transcript review is optional and may take up to one hour to review. Total participation for this study is one to three hours. The study will take place at XXXXX University, with specific mutually convenient times and locations pre-arranged with Alyssa Ferree.

POTENTIAL RISKS AND DISCOMFORTS:
The research procedures described above may involve the following risks and/or discomforts: interview questions may make you feel uncomfortable. You may choose to decline to answer any questions at any time. If you wish, you may choose to withdraw your consent and discontinue your participation at any time during the study without penalty.

BENEFITS:
You will receive no direct benefit from your participation in this study; however, the possible benefits to others include contributions to the body of literature about Ph.D.

students with children and expanding information regarding academic advising and mentoring of female Ph.D. students with children.

PRIVACY/CONFIDENTIALITY:
Any data you provide in this study will be kept confidential unless disclosure is required by law. In any report I publish, I will not include information that will make it possible to identify you or any individual participant. Specifically, I will use pseudonyms for your identity, including during the use of direct quotes from interviews. All electronic files and physical documents will also use pseudonyms. A master list with your identity and contact information will be stored separately from the collected data in a password protected file. All electronic files and audio recordings will be stored on a password protected computer, in password protected files. Physical notes and documents will be stored in a locked drawer. Documents with links to your identity will be destroyed upon completion of the research project. Electronic files and recordings will be deleted upon completion of the research project. Physical documents with links to your identity will be shredded upon completion of the research project. Consent forms will be kept for three years after the completion of research, per USF IRB requirements.

COMPENSATION/PAYMENT FOR PARTICIPATION:
You will receive a $10 gift card upon completion of your participation in this study. If you choose to withdraw before completing the study, you will receive $0.

VOLUNTARY NATURE OF THE STUDY:
Your participation is voluntary and you may refuse to participate without penalty. Furthermore, you may skip any questions or tasks that make you uncomfortable and may discontinue your participation at any time. In addition, the researcher has the right to withdraw you from participation in the study at any time.

OFFER TO ANSWER QUESTIONS:
Please ask any questions you have now. If you have questions later, you should contact the principal investigator: Alyssa Ferree, xxxxxx@xxxxxx.edu. If you have questions or concerns about your rights as a participant in this study, you may contact the University of San Francisco Institutional Review Board at IRBPHS@usfca.edu.

I HAVE READ THE ABOVE INFORMATION. ANY QUESTIONS I HAVE ASKED HAVE BEEN ANSWERED. I AGREE TO PARTICIPATE IN THIS RESEARCH PROJECT AND I WILL RECEIVE A COPY OF THIS CONSENT FORM.

PARTICIPANT'S SIGNATURE *DATE*