

ABSTRACT

Title of Dissertation: FEMALE DOCTORAL STUDENTS' FAMILY AND ACADEMIC DEPARTMENT EXPERIENCES AND THEIR RELATIONSHIPS TO CAREER CHOICES

Marta S. McClintock-Comeaux, November 2006

Dissertation directed by: Professor Elaine A. Anderson
Department of Family Studies

The purpose of this study was to determine factors that may influence women's choices of whether or not to enter the pool of tenure track faculty, and for those who do pursue these positions, factors that influence their choices of the type of institution in which they will seek employment: research I universities, liberal arts universities, or community colleges. Feminist and role theories guided the conceptual model and research questions. It was hypothesized that career salience, family structure, social support at the familial and department levels, the presence of a faculty role model successfully balancing work and family, and perceived work to family and family to work conflict would influence intended career tracks of female doctoral students.

The sample (n=273) included female doctoral students who were United States citizens at The University of Maryland, College Park who were married, partnered, separated, divorced, widowed, or single with children. A letter explaining the study with a link to an online survey was emailed to all students in this population and completed surveys were compiled on an internet website. This study revealed that career salience was a significant positive predictor of students' intent to pursue research I and liberal arts university tenure track positions, and for women's increased interest throughout their doctoral program in pursuing such faculty positions. Marriage was a significant negative

predictor for intent to pursue research I and liberal arts positions, while age and number of children were not significant predictors. Family support was a significant positive predictor for intent to pursue liberal arts positions, and a significant negative predictor for no intent to pursue faculty positions. Department faculty support was a significant negative predictor for career choice change scores for no intent to pursue faculty positions. Advisor support was a significant positive predictor of intent to pursue liberal arts faculty positions, whereas having a faculty role model was a significant negative predictor of no intent to pursue faculty positions. Work to family and family to work conflict were not significant mediating variables in the path between predictor and dependent variables. Implications for program and policy development are discussed.

FEMALE DOCTORAL STUDENTS' FAMILY AND ACADEMIC
DEPARTMENT EXPERIENCES AND THEIR RELATIONSHIPS TO
CAREER CHOICES

by

Marta S. McClintock-Comeaux

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2007

Advisory Committee:

Professor Elaine A. Anderson, Chair
Professor Sandra L. Hofferth
Professor Mary Ann Hoffman
Associate Professor Leigh A. Leslie
Assistant Professor Kevin M. Roy

©Copyright by

Marta S. McClintock-Comeaux

2006

Dedicated to Todd Reed McClintock

Your commitment to life and to facing whatever challenges arise is an inspiration.
Thank you for never, never giving up and for living life with extraordinary courage.

I love you, Todd.

ACKNOWLEDGEMENTS

Professor Elaine Anderson, my chair and friend, the hours you spent helping me narrow my topic, design the survey, learn how to conduct internet research, and review drafts upon drafts are beyond measure. Your support was and is part of the glue that held me together through this process. Your guidance has taught me an immense amount about the research and writing process and equally important, the value of having a mentor and advisor who is an exemplary role model. I admire the way you make all of us, your mentees and friends, feel supported in our academic and personal lives, and that we are a priority, even with the overwhelming responsibilities you have. Thank you, Elaine, for who you are, all that you do, and all that you have done for me.

I am grateful to my committee members for their time and expertise. Thank you to Dr. Leigh Leslie for sharing the article with me two years ago that inspired my topic. Thank you for providing perspectives that challenged my thinking, while also offering support through articles and friendship. To Dr. Sandy Hofferth, I am abundantly grateful for your research expertise. From the initial design of my survey, to questions about data analysis, you always made time to provide assistance. Thank you. To Dr. Kevin Roy, your writing about work and family helped to illuminate some of the most prominent issues in the field and expanded my thinking on the topic. Additionally, your shared insight of your own family's experiences with work and family in academia provided a human reference point that was so important to reflect upon when I was in the midst of pages upon pages of literature. To Dr. Mary Ann Hoffman, thank you for being a part of this committee, and for sharing your

guidance and lessons learned of how to conduct internet research. The information you offered made the process much smoother. To all my committee members, thank you for sharing your skills, knowledge, and talent, which challenged me, greatly improved the final product, and most importantly, enhanced my learning throughout this process.

As all family researchers know, social support is an important variable for resiliency and success. The support of faculty and graduate students in my department was abundantly important throughout my PhD experience. Thank you to all of you. I am especially grateful to three women with whom I have walked this journey hand in hand, Kate Kovalanka, Janet Liechty, and Christine Pegorraro Schull. You shared knowledge, kindness, love, wisdom, support, emails, hugs, laughter, and friendship so generously. I cannot thank you enough for all that you are and all that you have done to help me through the program, and to make both life and work an enjoyable ride.

To Ashley Crary, my dear friend who lives thousands of miles away, but always knows how to be here for me exactly when I need her. You are a gem in my life. Thank you for being who you are and for always, always, supporting me in every way possible.

My interest in families undoubtedly began with my family of origin. As the second of eight children, I was raised, and continue to have, the unparalleled good fortune of being surrounded by a large, devoted, loving family. The foundation of this family is built on the lessons our parents taught us through their words and actions, that loving and supporting each other is priority one. I extend my immense appreciation to my parents who have been a huge support and my cheerleaders

throughout my life. This journey through my doctoral program and dissertation is no exception. Thank you, Mom and Dad. My siblings, nieces and nephews, through blood and marriage, and my mom-and-dad-in-law also provide immeasurable support. Encouragement through words, emails, and hugs came at just the right time. Thank you to Sarah for your expertise and research guidance. The numerous hours my mom and sisters shared caring for our son (even driving hundred of miles to be with us) so that I could find my own “balance” of work and family to complete my dissertation were vital to my success. For everything, thank you to all of you. I could not have completed this without you. I am blessed to have the family that I do.

Finally, to my husband Patrick and our children, Carter and Tyler, you are the joys of my days and comforts of my nights. Carter, your “super-duper kisses” and hugs provide more energy and motivation than I can express. So many mornings, after late or sleepless nights, my exhaustion dissipated when greeted with your smiling face. The day became a joy just by being with you. I love you. To our second little one Tyler, just your presence was a motivation for me. Feeling your kicks in my belly while writing my results and discussion section helped to keep this experience in perspective and provided a welcomed, joyful distraction. I love you. To you, Pat, I cannot come up with the words to express my deepest gratitude. I believe it is your intelligence and passion for knowledge that inspired me for so many years that ultimately led to my decision to earn my PhD. Your love and support is abundant and overwhelming. It is because of your support, emotionally, physically, psychologically, not to mention financially, that I have been able to complete this journey. Thank you for giving me what I needed, when I needed it, and for asking

when you didn't know what that was. Thank you for boosting my confidence when mine wavered, for celebrating my achievements, and for always, always being there for me and our family. After 4 years of friendship, 9 years of dating, and 2 years of engagement, I thought I knew what I was getting when we married. Little did I know I was getting more of a man, father, and husband than I could have imagined. I love you. *Carpe diem.*

Table of Contents

Chapter I: Introduction	1
Chapter II: Review of Literature	5
Feminist Theory	5
Role Theory	8
The Struggle at the Interface of Feminist and Role Theory	9
Women and Work	9
Work-Family Issues and Theories of Their Intermingling	12
Work to Family and Family to Work Conflict	16
Faculty in Academia	19
The Graduate Student Experience	22
Intensive Mothering and the Gendered Experience of Work and Family	24
Career Salience	28
Family Structure	28
Social Support	30
Family Social Support	30
Professional Social Support	31
Role Models	32
Conceptual Research Model	33
Hypotheses	34
Research Questions	38
Chapter III: Methods	39
Population	39
Sample	40
Procedure	41
Definitions	42
Independent Variables	42
Mediating Variables	43
Dependent Variables	43
Measures	43
Demographics	43
Measurement of Independent Variables	44
Career Salience	44
Family Support	45
Department Faculty and Peer Support	46
Measurement of Mediating Variables	48
Work and Family Conflict	48
Measurement of Dependent Variables	49
Career Choice: Intent to Pursue Tenure Track Faculty Positions	49
Career Choice Change	49
Control Variables	51
Data Analysis	52
Missing Data	54

Chapter IV: Results	55
Demographic Characteristics	55
Study Measures: Mean Scores, Standard Deviations, and Reliability	58
Dependent Variables Description	60
Bivariate Relationships Among Study Predictor Variables	63
Hypotheses Predicting Group Differences	65
Individual Variables	66
Family Variables	66
Department Variables	68
Mediating Variables	70
Career Choice Change	71
Regression Models	72
Research Questions and Findings	73
Intent to Pursue Research I Tenure Track Positions	73
Intent to Pursue Liberal Arts Tenure Track Positions	75
Intent to Pursue Community College Tenure Track Positions	77
No Intent to Pursue Tenure Track Positions	77
Mediating Variables	80
Summary of Results	80
Chapter V: Discussion	83
Characteristics of the Sample and Application to Larger Population	84
Demographic, Individual and Control Variables	84
Dependent Variables	88
Discussion of Findings	89
Individual Variables	90
Career Salience	90
Family Variables	91
Relationship Status	91
Number and Ages of Children	93
Family Social Support	96
Department Variables	98
Department Peer Social Support	98
Department Faculty Social Support	98
Advisor Support and Role Models	99
Mediating Variables: Work to Family & Family to Work Conflict	101
Limitations	102
Feminist Theory and Role Theory	106
Programmatic and Policy Implications	108
Directions for Future Research	112
Conclusions	114

Appendices	116
Appendix A: IRB Narrative	116
Appendix B: E-mail to Recruit Participants	119
Appendix C: Consent Form	120
Appendix D: Internet Survey for Participants	122
Appendix E: IRB Approval Letter	130
References	132

LIST OF TABLES AND FIGURES

Figure 1: Conceptual Model	33
Table 1: Demographic Characteristics	56
Table 2: Scores and Coefficient Alphas for Study Measures	60
Table 3: Descriptive Data for Dependent Variables	62
Table 4: Bivariate Relationships between Predictor Variables	65
Table 5: Regression Analyses for Intent to Pursue Research I Positions	75
Table 6: Regression Analyses for Intent to Pursue Liberal Arts Positions	76
Table 7: Regression Analyses for Intent to Pursue Community College Positions	77
Table 8: Regression Analyses for No Intent to Pursue Tenure Track Positions	79
Table 9: Summary of Results	81

Chapter I

Introduction

Women's participation in the paid workforce has changed dramatically since the 1960s. In the United States, over sixty percent of women over age 16 are now employed outside the home; whereas only 36% of females over 16 years were employed in the 1960s (Luckett Clark & Weismantle, 2003). For women ages 25-35, the most common ages for women to marry and have children, the employment rate is currently even higher at 73% (US Census, 2000a). These changes in women's paid work patterns influence the structure and function of families in the United States. Women are marrying later. Women's median age of marriage in the 1970s was 20.8 but jumped to 25.3 in 2003 (US Census, 2004). From 1976-2000, the percentage of women in the United States ages 40-44 who did not have children nearly doubled from 10% to 18% (US Census, 2005a). Among those women who did have children, the mothers' average age of first birth increased by 3.5 years between 1970 and 2000 (Matthews & Hamilton, 2002).

Along with greater numbers of women entering the workforce, the number of solely male earner, married families has simultaneously decreased in the past several decades, now representing 23% of working households (US Census, 2004). In contrast, dual earner married couples comprise more than 50% of all working households (US Census, 2004). Although the number of married working women has increased, there remain discrepancies between the sexes regarding the status and stability that is attained in paid careers.

Academia provides one example of a professional setting where disparities between the sexes persist. Although women's doctoral degree attainment has increased

significantly in the past three decades, their entrance to tenure track positions has remained approximately the same during that time (National Center for Education Statistics, 2000). There is a large gap between the number of women earning PhDs and the number seeking tenure track positions. This gap is far greater for women as compared to men (Mason, Stacy, Goulden, Hoffman, & Frasch, 2005). For those women who do acquire a university position, they are more likely than men 1) to work as adjunct instructors; 2) to work at schools with lower pay such as community colleges and non-research institutions, and 3) if they are tenure track, to be in the lower ranks of academia as assistant professors (American Association of University Professors, 2004). A study at Berkeley, reported to be representative of large research institutions, found that among 1,283 tenured faculty, only 281 (21.9%) were women (Mason & Goulden, 2002).

Academia is a unique professional experience due to tenure. The reward of tenure is to be positively recognized by peers in making a significant contribution to the scholarship and advancement of the educational setting. Tenure requirements are determined by each university, usually including teaching, research, and service components. Typically, tenure decisions are granted based upon a faculty member's work during the first five years of her or his appointment. If tenure is granted, the faculty member is welcomed to the university permanently. For those who do not earn tenure, often one additional year is granted to the employee, most often used to search for another job, dragging with her or him the blemished record of being denied tenure.

For those women who do achieve a position in academia, the challenges are great, including negotiating a balance between work and family. Mary Ann Mason, Dean of the graduate division at University of California-Berkeley, and her colleague Marc Goulden,

examined the experiences of tenured women and men in academia and found significant results. Female faculty were less likely than male faculty to marry and have children, and women who had a baby within five years after earning a doctoral degree were less likely to be awarded a tenure track position. For those who had babies within five or fewer years prior to receiving their PhD, there was a negative relationship for women earning tenure and a positive relationship for men earning tenure (Mason & Goulden, 2002). Joan Williams titled this bias against mothers and their lack of representation in tenured positions as *the maternal wall* (Williams, 2004).

A further complication of employment in academia is the alignment of earning a PhD and the timing of life course development. The current average age of women at their first child's birth is 25 years old (US Census Bureau, 2005a). As women's educational attainment increases, age of mother at first child's birth also increases. Thus it is likely that female PhD's average age at the time of the birth of their first child is several years older than the average age for other women. Women's average age of earning a PhD is 33 years old (Wilson, 2003). For women in academia, it is likely that the times of most strenuous professional performance requirements (while in graduate school and early on the tenure track), times of "do or die," align with personal life circumstances requiring extensive time and effort in child bearing and care giving responsibilities. Thus, the initial career phase requiring a great commitment of work and time, when one is working toward an advanced degree and attempting to earn tenure, occurs during the same years most common for women to give birth and to have young children in the home.

Numerous studies have examined the experiences of tenured and tenure track faculty in academia, including personal, family, and work issues and how they influence the experiences of and choices made by faculty members (Blackburn & Hollenshead, 1999; Drago & Colbeck, 2003; Mason & Goulden, 2002). Additionally, research has addressed doctoral students' perceptions of how well their programs prepare them for faculty careers (Golde & Dore, 2001). However, few studies probe the blending of these work and family experiences from the doctoral students' perspectives. If a goal is to increase opportunities for women to enter academia and to bring greater balance in numbers between the sexes working in higher education, then it is important to understand the lives of women who will potentially enter this professional setting.

The purpose of this study is to determine factors that may influence women's choices of whether or not to enter the pool of tenure track faculty, and for those who do pursue these positions, factors that influence their choices of the type of institution in which they will seek employment: research I universities, liberal arts universities, or community colleges. Feminist and role theories guide the conceptual model and the research questions. Respondents were administered measures examining individual, family, and academic department experiences related to work and family. It was hypothesized that career salience, family structure, perceived work to family and family to work conflict, social support at the familial and department levels and the presence of a faculty role model successfully balancing work and family influence intended career tracks of female doctoral students.

Chapter II

Review of Literature

Feminist Theory

Feminism differentiates sex from gender. Sex is a biologically determined state of being male or female (although births occur that do not adhere to this duality) while gender is a socially constructed identity that varies among cultures. Within the United States culture, females are aligned with socialized feminine, “womanly” expectations and males to masculine, “manly” expectations. A power imbalance that elevates men and masculinity and devalues women and femininity is promoted and supported (Sollie & Leslie, 1994).

Feminist theory asserts that gender and power issues are central influences that should not be marginalized (Withers Osmond & Thorne, 1993). Historically, feminism’s foundation: focused on women’s experiences; recognized that power is arranged hierarchically in the United States with women categorized as ‘less than’ and restricted to this position by formal and informal social rules and organization; and assumed that the pursuit of knowledge was part of a process to inform advocacy and social change (Gordon, 1979). Although feminism has sprouted diverse theoretical and political strands, a common element at the foundation among diverse feminist theories is the assumption that individuals cannot be examined as isolated subjects but must be considered in terms of their diverse identities and experiences such as race, class, sexual orientation, religion, ability, family structure, age, education, and institutional locations (all of which also have inherent power imbalances) (Allen, 2004; Withers Osmond & Thorne, 1993).

Feminist family theory builds upon these stated premises and includes two important points. One, understanding women's experiences and perspectives in the family is crucial to understanding families (InGoldesby, Smith, & Miller, 2004). Two, there are many forms of families (InGoldesby et al., 2004); meaning "family" is not a concretely defined group. Families have diverse structures, roles, and members.

The present study is contextualized within liberal feminist theory. Historically, this facet of feminism examined specifically cultural prescriptions for females and women's experiences within systems, both of which were then compared to expectations for men and their experiences. Liberal feminism has also been labeled the full-commodification feminist theory wherein the goal is to prove that women are capable of performing in ways that match the standards that have been set for men (Williams, 1999). An historical example of liberal feminist theory in application is Betty Friedan's (1964) work in *The Feminine Mystique* where she asserts that women have the ability to achieve the same production and quality of paid work as men. Friedan's writings were progressive for their time; however the basic acceptance of sex segregation and the assumption that the expectations and standards for men's work were the ideal were not questioned. According to Withers Osmond and Thorne (1993), feminist theories, including liberal feminism have maintained their foundational content and emphasis, but now also often challenge dichotomous thinking. This shift includes rejecting positioning public spheres versus private spheres, such as pitting paid employee versus motherhood roles which perpetuate the "male" versus the "female" roles (Hill Collins, 1994) and don't allow individuals to embrace both. New theories posit that public and private arenas

are interconnected and that both economics and patriarchy influence both work and family (Williams, 1999).

The author recognizes the limitations present by creating this study based on liberal feminism in that it is difficult to fulfill the goals of activism and social change inherent to feminism when subscribing to a more traditional strand of feminist theory. As best stated by Lorde (1984), “The master’s tools will never dismantle the master’s house.” However, due to the current structure of higher education which is organized around capitalist and patriarchal values (tenure decisions often rely heavily on competition, including the number of articles published in the “right” journals and the amount of money received through grants) and the conflicting socialized cultural expectations communicated to women regarding family work and career work, liberal feminist theory is best suited to this research.

Finally, consistent with feminist values of recognizing diversity, power and privilege (Sollie & Leslie, 1994), this researcher recognizes that much of the literature of this paper focuses on collective gendered experiences of women, and specifically women working in academia, thus much of the rich diversity among this group will not be articulated. The author also recognizes that she and the participants in the study are afforded privilege. While women do experience oppression and discrimination both at individual and institutional levels (as documented here), females in academia simultaneously enjoy educational, social, and cultural privilege. There are many women who do not have the same access to resources or the personal and professional choices that most academic women are afforded.

Role Theory

Talcott Parsons introduced structural functionalism, a theory that relies on the idealization of the traditional nuclear family. This theory promotes the acceptance of complementary roles fulfilled by women and men wherein women embrace the ‘expressive role’ of providing nurturance and care for the family within the home and men excel outside of the home in the ‘instrumental role’ as the financial provider for the family. This family structure and adherence to these gendered functions, according to Parsons, are crucial for a successful society (Withers Osmond & Thorne, 1993). MacDermid, Roy, and Zvonkovic (2005) report structural functionalism is the primary theory influencing the major facets of work-family research, including work related stress, maternal employment, and multiple roles.

According to Withers Osmond and Thorne (1993), role theory emerged from the shadows of structural functional theory. Withers Osmond and Thorne (1993) suggest the Parsonian dictates of men’s and women’s roles continue to persist decades later and use as examples the language and concepts of ‘sex roles’ (which from a feminist perspective would correctly be called gender roles) and ‘men’s roles’ continuingly used to describe the provider and protector role and ‘women’s roles’ continuing to describe the home tasks and nurturing responsibilities.

Role theory purports that each individual takes on one or more roles that are rooted within social and professional identities and have inherent socialized behavior expectations as well as hierarchical social status, (Fredriksen-Goldesen, & Scharlack, 2001). While role theory is recognized as a distinct construct, role theory has segmented to different camps, specifically focusing on role strains and role gains (Fredriksen-

Goldesen & Scharlack, 2001), which are articulated later in the literature review. Thus role theory is used in the present study to articulate the relationship between the multiple family and professional roles and the impact on career choice.

The Struggle at the Interface of Feminist and Role Theory:

Feminist and role theories provide lenses that help to organize and examine the individual, familial, and professional experiences of female graduate students and how they may influence career choices. However, in mingling these theories, the conflicts between the two, and thus tension in the organization and reporting of this research is also magnified. While socialized role expectations, specifically those based on gender, are questioned and challenged as a basic assumption of feminism, role theory perpetuates the gendered expectations by using dichotomous perspectives on women's and men's experiences and roles (Withers Osmond & Thorne, 1993). Additional discrepancies between these theories are the issues of power and locus of control. Role theory traditionally focuses on individual experiences and choices, indicating that one's decisions determine her/his well-being. Feminism places the individual within a larger context, recognizing that social constructs such as gender, race/ethnicity, sexual orientation, and class, as well as institutional and political elements influence one's experiences (Withers Osmond & Thorne, 1993).

Women and Work

Women work. Women have always worked. Historically, although many women were active participants in the paid workforce, the dominating cultural prescription was that women were expected to work fulfilling the needs of the family and home (Cohen, 1996). There have been some historical times when women were encouraged to enter the

paid workforce. For example, men's exit from the United States workforce to fight in World War II resulted in cultural propaganda, such as Rosie the Riveter, and encouragement for women to do their duty and to fill the vacant positions. Upon men's postwar return to the United States, the cultural message was that women were to return to their duties in the home for unpaid work. At this time in history, many women did lose or vacate their paid positions to return to the household and caregiving duties in the home; however, 3.2 million mothers with children under 18 years maintained their paid employment (Cohen, 1996). Overall, women's participation in paid labor has increased almost every year since 1920, with approximately 17% of women employed in the 1920s, and over 60% working by the end of the 20th century (Cornell Employment and Family Careers Institute, 1999).

Government policies and courtroom decisions have attempted to rectify the sexism women experience in their careers. In 1963, the Equal Pay Act was the first legal attempt in United States history to break down the economic discrimination against women working outside of the home who received less pay than men for the same work. The Equal Pay Act required equal pay for equal work for women and men (Crosby, Williams, & Biernat, 2004). In 1964, an attempt to repair the unequal treatment of the sexes was advanced a step further. Title VII of the Civil Rights Act determined that employers who discriminated against women could be held accountable for unequal treatment. This decision prompted a shift in what was accepted behavior in the workforce. Court cases emerged that held perpetrators accountable for sexual harassment for both physical contact and hostile climates (Williams, 1999). These legal changes were important first steps toward improving the experience of women in the paid labor market.

Even with legislation to address sexism in the workplace, many of the discriminating behaviors and norms continue to plague the workforce. Approximately 35-50% of women report experiencing sexual harassment in the course of their careers (Gutek & Done, 2001), women currently earn 80% of what men earn for the same work (United States Department of Labor and Statistics, 2005), and discrimination based on gender for promotions remains pervasive in most professional fields (Coltrane, 2004). Additionally, the United States culture continues to value most those who exhibit the most extreme commitments of time and energy to work. This standard has been identified as the *ideal worker model*, and according to Williams (1999) discriminates against women.

The ideal worker model (Williams, 1999) is defined by the traditional male career. The ideal worker is one who begins “work in early adulthood and works full-time and full force for forty years straight, taking no time off for child bearing and child rearing” (Crosby, Williams, & Biernat, 2004, 677). The ideal worker is able to change jobs and geography, attaining the right job at the right time to advance a career (Williams, 1999). This model is based on the family structure of married couples with segregated roles, including the male breadwinner who is focused on and expected to attain professional success. He dedicates the time necessary to achieve promotions in salary and job title and to prove his commitment to his career. The ideal worker focuses on career because a partner at home fulfills the family and household responsibilities, freeing the ideal worker to focus on professional obligations and success. The ideal worker standard is possible for males due to biology and the privileges afforded men by the culturally prescribed breadwinner role. Williams (1999) argues that the ideal worker

standard is a form of discrimination against women. There has been a shift of women “into the workforce without changing the rules of the game, namely, that employers were entitled to ideal workers and men were entitled to be them” (Williams, 1999, p. 55). She argues that given women’s responsibilities in childbearing, it is impossible for women to be ideal workers. More than 82% of all women have children at some point in their lives (US Census Bureau, 2002). Meeting the expectations of multiple roles, and specifically the ideal worker standard is impossible for women with children as they are expected to meet the physical and emotional demands of childbirth, complete the majority of family and home demands, while simultaneously proving unfaltering commitment to careers (Williams, 1999). Among those who do not have children, some make this choice in part because career demands do not allow it (Mason & Goulden, 2002).

Phyllis Moen’s work also describes the influence of paid employment’s culture and its influences on women and families (Moen & Roehling, 2004). According to Moen, women shifted from the feminine mystique to embracing the *career mystique* that promoted the idea that hard work paid off and afforded identity, status, self-esteem, and independence (November, 2005). Moen reports that this shift to paid career idealization, without questioning the necessity of repackaging the workforce standards resulted in a work oriented society where face time at work is highly valued, families are starved for time, and workers are stressed (November, 2005).

Work-Family Issues and Theories of Their Intermingling

The complexity of combining work and family is a challenging one for families making these decisions, as well as researchers attempting to define and to explain the phenomena. MacDermid, Roy, and Zvonkovic (2005) explore metaphors that have

attempted to explain work and family issues (for example balancing, juggling, navigating, weaving), and suggest that how we define and discuss work and family influences our perceptions of choices and constraints for families and researchers. The “costs” of combining work and family became a major area of study decades ago as women began entering the paid workforce in larger numbers (MacDermid, 2005). Initial discussion of work and family issues focused primarily on the negative aspects and results of women’s participation in paid employment (MacDermid, 2005) and in fact today, the work-family conflict for dual earning couples continues to be defined as a woman’s problem (Spain & Bianchi, 1996). In the 1960s, role conflict was included in the language to explain work-family issues, describing it as the “simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other” (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964, p. 19) Researchers theorized that the conflict is exacerbated as people have access to limited stores of internal and external resources and that the responsibilities required to succeed simultaneously in multiple roles were beyond human ability (Goode, 1960). This postulate was termed the *scarcity hypothesis* (Marks, 1977). Greenhaus and Beutell (1985) defined the three crucial components of the scarcity hypothesis including 1) time, which is limited and thus adds stress; 2) role strain, in that responsibilities in one role affect performance in other roles due to tension among them; and 3) behavior, meaning fulfilling the duties of one role makes it more difficult to meet the duties required of another role. Work-family research supports this theory as articulated later in the literature and many researchers subscribe to the scarcity hypothesis due to the high expectations of the work and family spheres in the current cultural landscape, pointing to the fact that many Americans report feeling

pressured to excel in both the paid workforce and in developing a secure, happy family and a highly functioning home. “To move through the professional ranks (e.g., receive promotions, become a partner, get tenure), one is still expected to devote huge amounts of time and emotional energy to the profession, an expectation that renders career advancement and raising a family virtually incompatible—at least for women” (Coltrane, 2004, p. 215). Women are especially likely to struggle with the conflict and scarcity as they are not only working on careers, but are also responsible for the majority of childcare and household responsibilities (Williams, 1999).

Contrasting to the scarcity hypothesis is the *expansive hypothesis* (Marks, 1977). This perspective of work and family integration suggests that multiple roles, such as working both inside and outside of the home, are beneficial to one’s well-being (Barnett & Hyde, 2001). Marks (1977) suggested that time and energy are actually not limited resources, but rather are limited only by our subjectivity. He points to the fact that people often find the time and energy to complete tasks to which there is high commitment and toward people for whom one has positive regard. He also suggests that having a single role may absorb all of our energy, whereas having greater outlets and activity often results in increased energy.

Barnett has been the lead proponent of the expansionist theory. Her research found that engaging in multiple roles related to mental and physical health, and thus “role gain” (Barnett & Hyde, 2001). Those in multiple roles, as compared to those in fewer roles, self report better well-being (Thoits, 1992). Women working outside of the home (whether or not they were partnered or had children) reported greater well-being than women not working outside of the home (Barnett & Baruch, 1985). Embracing new and

multiple roles have been found to benefit the individual in terms of self-esteem, power, and social connections (Barnett, 1999). Experiences such as feeling in control, having autonomy, and gaining social skills at work have been found to result in positive spillover to the home (Grzywacz & Butler, 2005), thus engaging in work outside of the home had beneficial consequences in the home. Additionally, buffers have been identified that contribute to the benefits of engaging in both professional and personal roles, such as increased income, increased social support, and increased opportunities for success experiences (Barnett & Hyde, 2001).

The caveat of the expansion hypothesis is that an increase in roles does not guarantee improved well-being. There is a ceiling. If the number of demands or the time requirements for each role expand too high, it is likely that one will experience stress and overload (Barnett & Hyde, 2001). Here is where the scarcity hypothesis and the expansionist hypothesis meet. Academics are likely to experience the joys and frustrations as articulated in both the scarcity and expansive hypotheses. As stated, this group is likely to simultaneously experience the most extensive requirements of time, strain, and behaviors, while also accomplishing outstanding successes, the completion of a dissertation, the birth of a child, publishing articles, and receiving tenure. Although scarcity and expansive hypotheses are framed in the literature as conflicting phenomena, it seems that perhaps they are actually related. Both hypotheses focus on the experiences of an individual navigating personal and professional life within larger systems.

Researchers in both camps examine how personal traits and choices, familial structure, familial and professional support (or lack thereof) contribute to one's well-being in the area of personal and professional role integration. It is likely that academics recognize the

multiple benefits of work as articulated in the expansive hypothesis. However, as stated previously, even those who subscribe to the expansive hypothesis report an upper limit when commitments and stresses of multiple roles no longer feel beneficial and instead become detrimental (Barnett & Hyde, 2001). Because the sample for this study is likely experiencing, and/or anticipating multiple roles, most of whom are at their peak of intensity in terms of time, stress, and behaviors both professionally and personally, it is likely that they have broken through the benefits as theorized in the expansive hypothesis and more attention is focused on the stress associated with their experiences rather than the benefits. Thus this literature focuses primarily on the challenges for women in work and family rather than the benefits.

Work to Family and Family to Work Conflict

One of the most often cited definitions of work-family conflict is a form of “interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role” (Greenhaus & Beutell, 1985, p. 77). Thus, “family can interfere with work (family to work conflict) or work can interfere with family (work to family conflict)” (Barling, Kelloway, & Frone, 2005, 115). Additionally, individual, family, work, and cultural factors have all been studied as both predictors and outcomes in work and family research (Barling, et al, 2005). Within the context of this paper, ‘work-family conflict’ is used to address the topic and research area universally, whereas ‘work to family conflict’ identifies specifically how experiences and stress at paid work have consequences for the family, and ‘family to work conflict’ addresses how family experiences and stresses affect paid work.

Increased roles and responsibilities are likely to increase stress (Perry-Jenkins, Repetti, & Crouter, 2000) and the degree of work-family conflict is dependent on the specific characteristics of families and their jobs. For example, the number and flexibility of work hours, family size, and ages of children are examples of work and family components that influence stress and role strain (Perry-Jenkins, Repetti, & Crouter, 2000).

Individuals are more likely to allow work to overshadow family time and responsibilities than vice versa (Kinnunen & Mauno, 1998). Thus, it is not surprising that a higher prevalence of work to family conflict is reported as compared to family to work conflict (Barling, Kelloway, & Frone, 2005). Work to family conflict may begin even prior to the establishment of a new family unit. Moen reported that in response to work-family conflict, many adults are choosing not to marry or are marrying later (November, 2005). Drago and Colbeck (2003) found that faculty report engaging in productive bias avoidance, which “often centers around fertility and partnering behaviors, including decisions to avoid partnering or childrearing altogether, and choices to delay or limit the number of children raised, all in order to achieve career success” (p. 3). Moen’s research supports these childbearing findings that working adults are not having children, are having fewer children, or are delaying parenthood (November, 2005). For those who choose to have children, the presence and ages of children consistently are found to increase both work to family and family to work conflict (Barling, Kelloway, & Frone, 2005; Moen, November, 2005).

This potential for increased conflict may explain why in most dual career couples with kids, at least one of the adults, most often the woman, decreases paid work time and

responsibilities (Edgell Becker, & Moen, 1999). One study found that among women aged 35 who had always intended to participate in paid work, they were likely to do so unless they had a child in pre-school or they had a 'large family' (Hakim, 2002).

For those negotiating work to family conflict, stressful work days, including high time commitment and high psychological demands result in withdrawal from family interactions, changes in psychological and physiological states, and emotional distress (Perry-Jenkins, Repetti, & Crouter, 2000). Work related variables that have been found to increase stress include the average number of hours worked each week (Frone, Yardley, & Markel, 1997; Grzywacz & Marks, 2000; Thompson, Beauvais, & Lyness, 1999) and psychological investment in work (Frone et al., 1997). As each of these factors increased, work to family conflict also increased. Conversely, factors such as job security (Batt & Valcour, 2003) and flexibility of one's working hours (Jacobs & Winslow, 2004) result in lower perceptions of work to family conflict. When there are lower expectations for employees to work beyond the regular work hours, employees report lower levels of work to family conflict (Thompson et al., 1999).

Family to work conflict, although less often reported, has been found to exist as a distinct construct. Grzywacz & Marks (2000) found that stress and conflict with one's spouse increases family to work conflict. One of the strongest predictors of family to work conflict is the number of hours spent on domestic duties and caregiving, with more hours spent on these tasks resulting in increased family to work conflict (Frone et al., 1997). In addition to time spent physically addressing the needs of the home and family, emotional and psychological investment in family members influences family to work

conflict. As this investment increases, so too does the internal conflict (Frone, Russell, & Cooper, 1992).

Faculty in Academia

Academia began as an institution for men, with legal exclusion of women from higher education. Males were recognized as both the creators and receptors of intellectual knowledge and were believed to have superior knowledge and abilities to women (Harwarth, Maline, & DeBra, n.d.). The organization of the tenure system is structured well to meet men's biology, but not women's biology (Williams, 1999). Tenure requirements vary among universities; however, tenure track faculty members are required to meet research, teaching, and service requirements as specified by a university. The faculty member typically has five to six years from the commencement of her or his position to prove her or his ability to perform. The faculty member creates a portfolio of career accomplishments that are sent to a department committee for review, followed by a university committee for review. These two committees decide whether or not the faculty member has met the university standards for tenure in the given amount of time.

It seems to be accepted in higher education discourse that requirements of teaching, research, and service vary among different types of institutions. There are not established standards or requirements for tenure at different types of schools, such as research I, liberal arts, and community colleges. Published data are not available to present a hierarchy of time required and status awarded to faculty at each of these three types of schools. Interviews with faculty at each type of university afforded a view of their perceptions of the requirements to achieve tenure.

The cliché of “publish or perish” communicates universities’ expectations for research I institutions, where the number of published articles, and the prestige of the journals in which they are published are crucial to favorable tenure recommendations. The chair of one department in a large, research I state university reported that to receive tenure in departments similar to hers (social science departments), faculty are usually expected to publish at least two articles each year in peer reviewed journals. She said that the expectation is that faculty will usually have a 3-2 teaching load (teaching three classes one semester and two classes the next), but that most of the faculty actually complete a 2-2 load as tasks such as supervising graduate students’ research may count toward their teaching load. According to this chair, faculty at research I universities are usually expected to spend 45% of their time on research, 45% on teaching and 10% on service (S.A. Koblinsky, personal communication, May 4, 2006).

According to a tenured chair in a small liberal arts school (S.L. Hutson-Comeaux, personal communication, March 5, 2006), faculty members at her school must excel in their teaching and she estimates that about 50-60% of the tenure decisions are based on the quality of faculty teaching, including student evaluations of their work from every semester they have taught. Faculty are on a 3-2 teaching schedule, teaching three classes one semester and two classes the next semester. Scholarship (the terminology used for research) is the next priority and carries about 30-40% of the weight in tenure decisions. According to this faculty member, a faculty member needs to demonstrate consistency in publishing (rather than 3 articles published immediately before applying for tenure) but she estimates that at most, an article published once every other year in a peer reviewed journal would be acceptable for many departments. Finally, service accounts for

approximately 10% of tenure decisions at this liberal arts school. She reports committees, community service, reviewing for conferences, and serving on local, state, and or national organizations committees would all contribute to service performance.

Community colleges focus on teaching and providing assistance to students. According to one faculty member in a community college, faculty teach 5 classes each semester (C. Twombly, personal communication, May 18, 2006) Faculty must be accessible to students on a regular basis, providing any academic support that students may need. Research is not an expectation of the college; however professional development, such as improving teaching skills and presenting at conferences is encouraged. Faculty are expected to provide service to their department, and their college. Some community colleges no longer use a tenure track system, and faculty instead are evaluated yearly and receive contracts that increase in length of years the longer faculty work at the university.

Status in United States culture tends to be heavily based on economics. If salaries are an indication of prestige and performance expectations, research I universities are at the pinnacle, followed by liberal arts universities, and lastly community colleges (Smallwood, 2005). Thus the notion that career demands are highest for tenure track faculty at research I universities, followed by faculty at liberal arts colleges, and lastly for community college faculty is supported.

Academia affords faculty flexibility to some degree of the “when” and “where” to do their work. However, such flexibility is also likely to result in inaccurate perceptions of the amount of time and energy required to succeed as an academic. Academia’s career standards are based on the ideal worker standard, with both quantity and quality role

responsibilities often overwhelming both tenure track and seasoned faculty. These high standards often threaten finding a balance among work and family roles. Joan Williams explains, “From graduate students to full professors, academics, not married to homemakers, often feel caught between a work world that expects 12 hour days and the strong cultural expectation that raising children takes time...(academics’) jobs are sized too big to give our children the time we feel they need” (2000, p. 1).

For faculty, inequities between the genders in higher education are still pervasive. Although the number of women faculty and instructors in academia has increased, with women holding one third of all faculty positions in the United States, females are overwhelmingly in the lower ranks of instructors, adjunct professors, and assistant professors (Mason & Goulden, 2002; Knight Higher Education Collaboration, 2001). Only about 20% of full professors are women (Knight Higher Education Collaboration, 2001). The differences between women’s and men’s average salaries in academia are greater now than they were 30 years ago (Benjamin, 1998).

The Graduate Student Experience

Women are awarded 51% of bachelor degrees in the United States (US Census Bureau, 2002). Women have increased attainment of graduate education. In the early 1970s, only 14% of all doctoral degrees were awarded to women. By 2001, the percentage of doctoral degrees awarded to women increased to 46% (National Center for Education Statistics, 2003). From a student perspective, there has been great success in closing the gender gap in academia for both undergraduate and graduate students.

Graduate students are motivated to enter doctoral programs for a variety of reasons. Golde & Dore (2001) researched a national sample of graduate students using

The Survey of Doctoral Education and Career Preparation. They found that the majority of doctoral students are interested in faculty careers, however the range differs among disciplines, including a high of 89% in philosophy and a low of 36% in chemistry expressing this interest. Forty-eight percent reported interest in a faculty position as their next step in their career. However, 35.4% of the respondents reported “their interest in faculty careers had declined since the start of the program” (Golde & Dore, 2001, 6). The authors did not examine variables that may have influenced this change.

The question remains why participation of male and female doctoral students is nearing equal numbers, yet there are great disparities in the numbers of women and men in tenure track faculty positions, particularly in research I universities (Mason & Goulden, 2002). According to Mason & Goulden (2002), a primary place of “leak in the pipeline” where women are dropping out of academia occurs between the receipt of the PhD and entrance to the pool of tenure track candidates for faculty positions.

A study by Konrad (2003) of graduate students in business initially seems to explain this phenomena for a similar population. She found that women more than men strategize and plan ahead how they will balance work and family. She also found that those with greater household responsibilities (most commonly women in heterosexual families) stress the importance of finding jobs that have fewer demands of time and more flexible hours. However, the study also found that women did not reduce their career aspirations and both women and men were consistent in their preferences for jobs, even after the arrival of children.

Intensive Mothering and the Gendered Experience of Work and Family

There is evidence that boundaries for expected gendered roles in terms of work and family have blurred, affording options for women and men to explore previously segregated spheres. More women today than ever before are in the paid workforce (United States Department of Labor and Statistics, 2005), and more men than ever in United States history have taken on the role of primary caregiver or have increased participation in household and childcare tasks in dual-parent homes (Coltrane, 2000). However, even with these significant changes, gendered attitudes and behaviors persist, especially when children enter the family for heterosexual couples.

In the United States culture, identity of *mother* is a significant role for women. Motherhood as a life cycle marker for female adults is theoretically idealized in dominant culture (as witnessed by the responsive joy expressed by most when told a baby is on the way). However, the realities of motherhood and the consequences this role often have on performance expectations and assumptions for women both inside and outside of the home are often not as positive. Johnston and Swanson (2003) describe the *maternal bliss myth* “that motherhood is the joyful fruition of every woman’s aspirations... (and) any maternal unhappiness and dissatisfaction (is attributed to) failure of the mother” (p. 22). The social expectations for quality mothering are steep, assuming that she is completely devoted to her children and always responsive to their needs (Kobrynowicz & Biernat, 1997). The expectations or embodiment of these behaviors have been labeled *intensive mothering* (Hays, 1996). Fathers are not held to the same standards (Kobrynowicz & Biernat, 1997).

Assumptions of the personal and career capabilities of the women occupying the motherhood role are often negative and affect access and mobility in women's careers. Women who are pregnant are less likely than women who are not pregnant to be hired (Bragger, Kutcher, Morgan, & Firth, 2002). Motherhood, but not fatherhood, decreases the likelihood of being contacted for job opportunities (Firth, 1982), and mothers are assumed to have less competence as compared to fathers (Friege, Biernat, Haines, & Deaux, 2004). Mothers earn 60% of the wages of fathers (Crosby, Williams, & Biernat, 2004). Friege, Biernat, Haines, and Deaux (2004) found that overall, "the mere anticipation that a woman will adopt the motherhood role is sufficient to elicit negative work-related evaluations" (p. 751). Women with children are assumed to have less commitment to their work, partly because they are more likely to work part-time than married women without children or men; however women with children still report equal importance of their employee role to their identity as compared to all others (Ridgeway & Correll, 2004).

The bias against women is enforced in the work to family literature as well, assuming that women who work outside of the home will not be as good mothers in comparison to women working full-time in the home; "good mothers" must always be available to respond to their children and their needs (Kobrynowicz & Biernat, 1997). Bridges, Etaugh, and Barnes-Farrell (2002) found that homemakers were perceived by college students, ages 17-41, as more effective parents as compared to parents who worked outside of the home. This study also found that participants had higher standards for full-time moms as compared to full-time dads in expectations for expressed affection and responding to kids' needs. (This sample is important to this study as undergraduates

are future doctoral students and academics, thus their reported biases are likely to influence their own feelings of work-family conflict).

The birth of a child is a time of great joy for most adults and a life altering experience that introduces new perspectives and new responsibilities. While there is some evidence that stress related to work and family balance remains at approximately the same level throughout the life cycle while children are in the home (Duxbury & Higgins, 2001), most research in this area indicates that the time of greatest stress of work and family conflict occurs when young children are present in the home (Barling et al., 2005).

The entrance of a family member introduces increased financial obligations. Depending on household income, using 2004 figures, the average amount spent every year on a child from birth through seventeen years of age ranges from \$7,500 to \$15,000 (Lino, 2005). Significant differences in wages exist between women with children and women without children. Mothers earn 4% less for each child as compared to women without children. The differences were explained in that some women suspended time on the job to have children, while others felt compelled to transition to part-time work, both of which affected the smooth career trajectory up the hierarchy toward seniority (Budig & England, 2001).

Duxbury and Higgins (2001) examined how the introduction of children to a family affects mothers and fathers, and made comparisons among mothers, fathers, and adults without children. One finding was that a child introduces emotional and psychological challenges for women. Mothers report more stress than fathers. Mothers report the highest levels of role overload and family to work conflict as compared to all men and women without children, as well as greater stress and depression, and lower life

satisfaction than women without children. Fathers on the other hand report lower levels of stress, less depression, and higher levels of life satisfaction than men without children (Duxbury & Higgins, 2001).

Women are responsible for 70 to 80% of the childrearing in families in the United States (Williams, 1999), yet women still worry about the amount of time they spend with their children. Although it is perceived that mothers in general perform more childcare tasks as compared to fathers, mothers who work in the paid labor force are perceived as less effective parents (Bridges, Etaugh, & Barnes-Farrell, 2002). Tiedje (2004) found that women attempting to negotiate work and family reported wanting more time to interact in play with their children, but that in the time they had at home, they were overwhelmed with household tasks. For those who felt they were successful in addressing the pulls of work and family, they reported substantial personal costs such as exhaustion and a loss of personal fulfillment (Tiedje, 2004). Although satisfaction was attained for some as parents, this feeling did not buffer the internal stress induced from work-family conflict.

The amount of time required maintaining the family and household is another variable found to influence work and family conflict. Families' structures and gendered roles have changed over time. For married couples without children, the amount of time reported on domestic duties is an average of 36.8 hours each week, while for married couples with children, the average number of hours spent on domestic tasks jumps by almost fifty percent to 54.0 hours (Sayer, 2002). Single moms report spending on average, 36.9 hours a week on domestic duties (Bianchi & Raley, 2003), thus single moms literally spend full-time working the "second shift" (Hochschild & Machung, 1989).

Prescribed gender roles, while increasingly flexible, still withstand the societal pressure, and the sex assigned expectations for women and men persist (Coltrane, 1996). For heterosexual couples, the birth of a child often results in greater sex segregation of roles and responsibilities (Coltrane, 2004). Improvements have been achieved in the disparity, but women still fulfill the majority of the household and family responsibilities (Coltrane, 2004); some women complete more than twice the amount of household responsibilities as compared to men (South & Spitze, 1994).

Career Salience

In work-family research, women are often the focus of the studies; however women's preferences of time and effort allocation to work and family are often excluded (Hakim, 2002). Career salience is the level of commitment one has to a work identity (Thoits, 1986). This variable is based on Hakim's (2002) preference theory that examines women who have the choice to work: 1) in the home (children and family are the priority), 2) in a paid position (work centered women who are often childless), or 3) to combine the two (labeled adaptive and found to be a diverse group in family structure and work commitment) (McRae, 2003). Hakim reports this theory is multidisciplinary and addresses women's prospective plans regarding work-family choices. Hakim states that National Longitudinal Surveys have "repeatedly shown the importance of motivation, values, and attitudes as key determinants of labor market behavior (and) occupational status" (2002, p. 432).

Family Structure (relationship status; number of children, and ages of children)

Relationship status, the timing, presence, and ages of children, are hypothesized to be related to academic degrees and careers. Statham, Vaughan and Houseknecht in

“The Professional Involvement of Highly Educated Women” (1987) found it was much more likely for women who were not employed outside of the home and women who were employed but not as involved in their profession to have married and started having children prior to finishing their degrees. Women with children were more likely to be less involved in their work and more likely to work part-time than women without children. Additionally, in a study comparing female doctoral students who were “early” and “late” finishers (estimating the amount of time it took students to earn their degree), late finishers were much more likely to report their progress in the program was inhibited by child care responsibilities (Maher, Ford, & Thompson, 2004). The timing, presence, and ages of children have consistently been found to negatively affect the success of some faculty members (Drago & Colbeck, 2003; Mason & Goulden, 2002; Williams, 2001), while other faculty report intentional decisions about partnering and children that would increase their likelihood to obtain tenure (Drago & Colbeck, 2003; Mason & Goulden, 2002; Williams, 2000).

Children introduce new stresses for a family. Family structure affects family to work conflict in that families with children have higher family to work conflict, and the greater the number of children, the more the conflict increases (Grzywacz & Marks, 2000). Family to work conflict is highest for single parents with children under 18 years old, followed closely by married couples with children under 18 years old, as compared to all other groups of 20-54 year olds (Barling, Kelloway, & Frone, 2005). Some studies that examine the experiences of working parents compare those with a child under two years to those with children two years or older because most children whose parents work are in childcare by the age of 2 years (S. L. Hofferth, personal communication, November

30, 2006). However, in the work and family literature, young children under six years have been found to increase the conflict (Barling, Kelloway, & Frone, 2005). The difference between those with children under six and those who do not have children under six is likely caused by school participation. By age six, most children have begun traditional school participation, thus there is a large span of time during the day where parents are not required to find care for their children, which is likely to decrease the stress felt by parents. For this reason, the age of children variable compares women with a child under six to all other women.

Social Support

Social support from multiple relationships can be highly influential in one's well-being and life course trajectory. Support can be offered in the form of listening, providing time, offering guidance, sharing household tasks, providing money and resources, or sharing affection. Social support can serve as a buffer to stresses such as change and loss (Cunningham & Barbee, 2000).

Family Social Support

Happy marriages have been correlated with family to work positive spillover, meaning the benefits of the marriage positively influence an individual's experience at work (Grzywacz & Butler, 2005). Those who feel supported and confident at home are likely to invest more time and energy into their paid work and to feel more satisfied with their work (Dittmann, 2005). Husbands' support of their wives has also been found to influence women's career goals and choices (Parasuraman & Greenhaus, 1993). Conversely, doctoral students enduring stress in their partnered and other familial relationships during their time in graduate school report greater emotional turmoil as

compared to other doctoral students (Maher, Ford, & Thompson, 2004). Emotional support from a partner and other family members can decrease perceptions of family to work conflict (Grzywacz & Marks, 2000), as can behavioral support with family responsibilities, such as household chores and childcare (Frone, Yardley, & Markel, 1997).

Of course, all families experience stress. Walsh (1998) found that if a family system responds to stress by supporting one another, utilizing personal attributes, having positive perceptions, and seeking community support, the result is often resilient family members with increased protection from stress and its negative consequences. Relationships, in the form of emotional support from family members, have been found to be critical for students to achieve success in doctoral programs (Maher, Ford, & Thompson, 2004).

Professional Social Support

For doctoral students, both faculty and peer doctoral student relationships are potential sources of social support. The advisor-student relationship is extremely important to the experience and success of the student (Zhao, Golde, & McCormick, 2005). Maher, Ford, & Thompson (2004) found that female doctoral students who completed their degrees quickly reported that establishing relationships with supportive, involved advisors and mentors was critical to their success. The support of peer doctoral students too has been found to assist in the efficient achievement of the doctoral degree. Overall, positive experiences for students at their universities have been linked to students' success in learning department and discipline norms (Weiss, 1981).

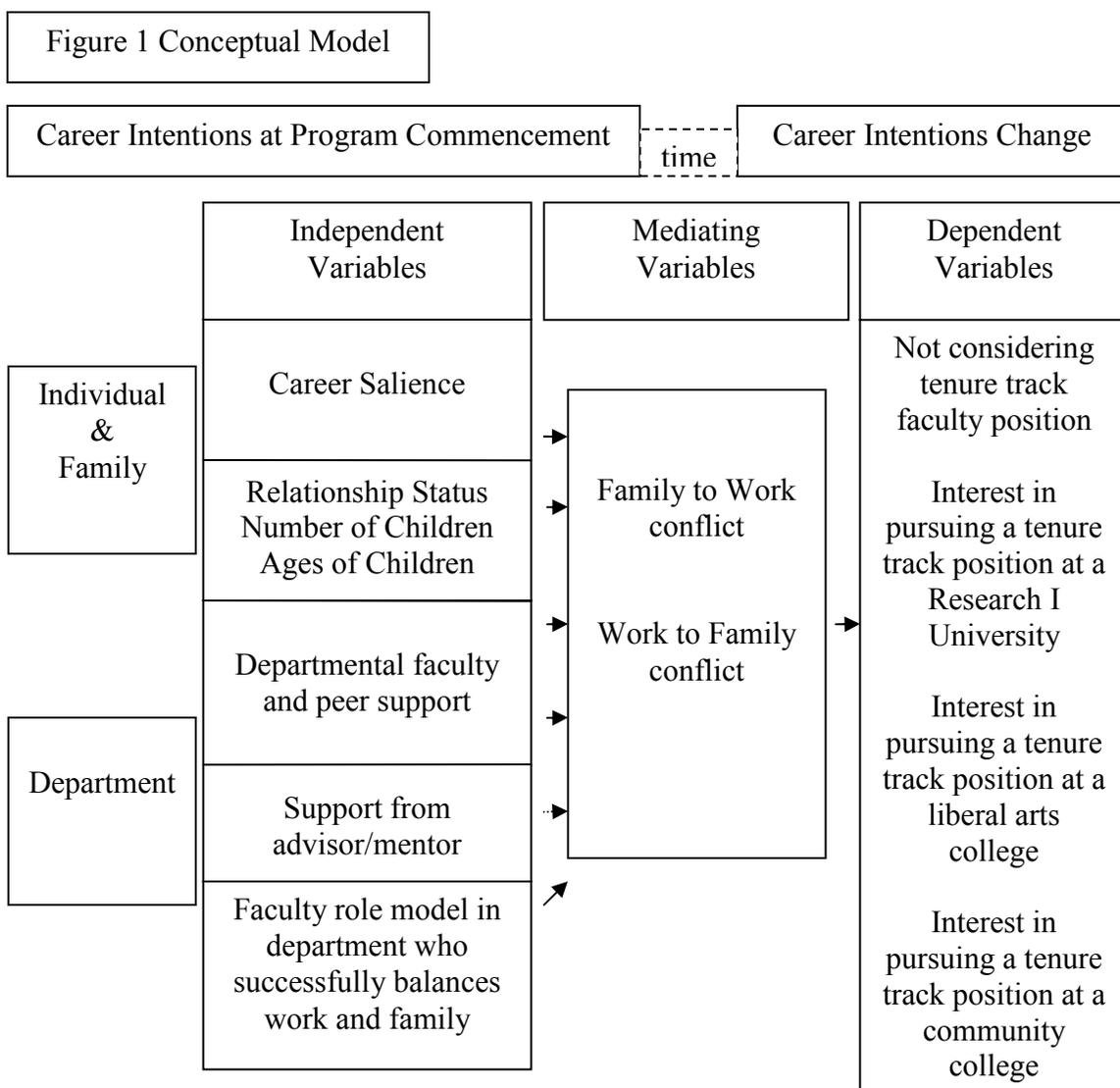
Professional social support has also been found to have a significant relationship to work-family conflict in job environments outside of higher education, findings that may be transferable to academic work settings. When employees have jobs with autonomy and feelings of being in control, and they receive social support from a supervisor, they are likely to spillover positive work benefits to the home (Dittmann, 2005). Coworkers' (a relationship similar to peer doctoral students) support (Frone, Yardley, & Marks, 2000; Grzywacz, & Marks, 2000) and supervisor support for balancing work and family (Batt & Valcour, 2003) have been found to decrease the amount of work to family conflict experienced by an individual. When work cultures encourage a balance of work and family, employees tend to experience lower levels of work-family conflict (Thompson, Beauvais, & Lyness, 1999).

Role Models

Perceptions of what is possible and probable are often created through observation of those in one's familial, social, and work systems. "People use others like themselves – in terms of education, training, and job skills – for making...comparisons" (Coltrane, 1996, p.136). For graduate students, they are likely to compare current situations to other graduate students. However, when envisioning their future lifestyle, their career is a crucial component in that formula. The available comparison group with whom graduate students can estimate their future careers in academia are the faculty members in their department. Therefore, it is likely that doctoral students' perceptions of whether or not faculty members balance work and family in ways that are desirable to the student may influence students' interest in pursuing a tenure track faculty position.

Conceptual Research Model

Feminist theory and role theory guide the construction of the theoretical research model (see Figure 1). It is hypothesized that career salience, relationship status, number of children, ages of children, family support, departmental peer support, departmental faculty support, mentor/advisor support, and the presence of a faculty role model will affect the career decisions for doctoral students and that work to family conflict and family to work conflict will be mediating variables in this model.



Hypotheses

Individual Variables

- 1.1: Career salience will be a significant predictor in the report of likelihood of pursuing a tenure track faculty position.
- 1.2: Women with high career salience will be more likely to report intent to pursue a tenure track faculty position than those women with low career salience.

Family Variables

- 2.1: Relationship status will be a significant predictor in the report of likelihood of pursuing a tenure track faculty position.
- 2.2: Number and age of children will be a significant predictor in the likelihood of pursuing a tenure track faculty position.
- 2.3: The independent variable, the number of children, will account for the greatest variance for the dependent variable intended career paths.
- 2.4: Women who have children will be less likely to report intent to pursue a tenure track faculty position than all other women.
- 2.5: Women with children who intend to pursue a tenure track faculty position will be more likely to identify their first choice for positions at a liberal arts or community college than those without children.
- 2.6: Women with at least one child under age six will be less likely to report intent to pursue a tenure track faculty position than all other women.
- 2.7: Women with at least one child under age 6 who intend to pursue a tenure track faculty position will be more likely to identify their first choice for positions at a liberal arts or community college than all other women.

- 2.8: Women with two or more children in the household will be less likely to report intent to pursue a tenure track faculty position than women with one child.
- 2.9: Women with two or more children who intend to pursue a tenure track position, will be more likely to identify their first choice for positions at a liberal arts or community college than those with one child.
- 2.10: Family social support will be a significant predictor in the likelihood to pursue a tenure track faculty position.
- 2.11: Women with higher levels of family social support will be more likely to report intent to pursue a tenure track faculty position than those reporting lower levels of family social support.

Department Variables

- 3.1 Perceived peer social support in the department will be a significant predictor in the likelihood to pursue a tenure track faculty position.
- 3.2: Women with higher levels of reported peer social support will be more likely to report intent to pursue a tenure track faculty position than those with lower levels of peer support.
- 3.3: Faculty support for work and family balance will be a significant predictor in the likelihood of pursuing a tenure track faculty position.
- 3.4: Women with higher levels of reported faculty support for work and family balance will be more likely to report intent to pursue a tenure track faculty position than those with lower levels of faculty support.
- 3.5: Perceived support from an advisor/mentor in the department will be a significant predictor in the likelihood to pursue a tenure track faculty position.

- 3.6: Women with higher levels of advisor/mentor support will be more likely to report intent to pursue a tenure track faculty position than those reporting lower levels of support.
- 3.7: Having a mentor/advisor who maintains perceived desirable work/family balance will be a significant predictor in the likelihood to pursue a tenure track faculty position.
- 3.8: Women with at least one mentor/advisor who maintains perceived desirable work/family balance will be more likely to report intent to pursue a tenure track faculty position than those who do not have such a mentor/advisor.

Mediating Variables

- 4.1: Work to family conflict will be a significant predictor in the likelihood of pursuing a tenure track faculty position.
- 4.2: Women with higher levels of work to family conflict will be less likely to report intent to pursue a tenure track faculty position than those reporting lower levels of work to family conflict.
- 4.3: Women with higher levels of work to family conflict who intend to pursue a tenure track faculty position will be more likely to identify their first choices for positions at liberal arts or community colleges in contrast to those with lower levels of work to family conflict.
- 4.4: Family to work conflict will be a significant predictor in the likelihood to pursue a tenure track faculty position.

- 4.5: Women with higher levels of family to work conflict will be less likely to report intent to pursue a tenure track faculty position than those reporting lower levels of work to family conflict.
- 4.6: Women with higher levels of family to work conflict who intend to pursue a tenure track faculty position will be more likely to identify their first choices for positions at liberal arts or community colleges in contrast to those with lower levels of work to family conflict.

Career Choice Change

- 5.1: Women with children who entered their doctoral program with intent to pursue a tenure track faculty position will be more likely to have career choice intentions change than those women without children.
- 5.2: Women with low family support who entered their doctoral program with intent to pursue a tenure track position will be more likely to have career choice intentions change than those women with high family support.
- 5.3: Women with low department support who entered their doctoral program with intent to pursue a tenure track position will be more likely to have career choice intentions change than those women with high department support.

Research Questions

- 1) How much do each of the independent variables (family variables and academic department variables) account for the variance for each of the dependent variables (intended career paths)?
- 2) What affects do independent variables (family variables and academic department variables) have on each of the dependent variables (intended career choice change)?
- 3) How much do each of the mediating variables (work to family conflict and family to work conflict) account for the variance of each of the dependent variables (intended career paths)?

Chapter III

Methods

Population

There are 2,601 doctoral students at the University of Maryland College Park campus who are United States citizens (Debbie Thomas, Office of the Registrar, April 25, 2006). According to the Office of Institutional Research and Planning (2006), among those students, 66% are White, 12.9% are Black, 8.9% are Asian Americans, 4.5% are Latina/o, .7% are American Indian, and the race/ethnicity is unknown for 6.8% of doctoral students. Eighty-seven percent of doctoral student are enrolled full-time, while 13% are enrolled part-time. Females represent 48.9% of the doctoral student population (The Office of Institutional Research and Planning, 2006), for a total population of 1,272 doctoral women at The University of Maryland, College Park who are United States citizens. On the College Park campus, women are represented in every college, with the greatest percentages enrolled in education (28%) and arts and humanities (26%). The colleges where women are least likely to be enrolled are architecture (.2%) and Journalism (.4%) (Office of Institutional Research and Planning, 2006). Obtaining a sample from a large university affords the opportunity to retrieve responses from a diverse student sample, including varied disciplines, with 71 different departments that award doctoral degrees (Hill, 2005), ranging from family studies to aerospace engineering. A sample of respondents with varied academic departments enhances the breadth of the study. The population also includes diversity in race and in terms of geography based on residential status with the potential for all states to be represented.

(For Internal Review Board (IRB) narrative and approved stamp, see Appendix A; for IRB consent form, see Appendix C.)

Sample

The sample for this study includes female doctoral students at The University of Maryland, College Park who are United States citizens who are married, partnered, separated, divorced, and widowed, with or without children, as well as single women who have children. Women with these family structures are included in this sample because it is hypothesized that having a current or former committed partner and/or having children impacts the amount of support women have, and impacts the amount of work and family conflict experienced. Including single women without children would introduce a different type of family experience which is not examined in this study.

The university does not collect data regarding relationship status or parental status of doctoral students. Students who are included in these categories could not be selected from the larger population, thus all female doctoral students who are United States citizens were initially invited to participate in the study. A total of 385 women responded to the request. Two respondents agreed to participate but did not answer questions beyond basic demographic data, thus they were dropped from the sample. Four students provided no information regarding relationship status or number of children and were excluded from the study. A total of 106 women (27.5%) identified as single without children and were not included in the sample. The final sample included 273 women. Seventy-two and one half percent of students who completed the survey fit the parental/relationship status criteria. Using this percentage (72.5%) of the total female doctoral student population (1,272), the researcher estimates the total population among

female, United States born doctoral students who are married, partnered, separated, divorced, widowed or single with children is 922. With 273 women included in the sample for the current study, the estimated response rate is 30%.

Procedure

Email addresses were collected from the University of Maryland College Park registrar. An email letter that explained the study and the survey, with a link to the online survey, was sent to the email addresses of all female and male doctoral students (See Appendix B). For the purposes of this study, only the women's responses are reported. The letter explained confidentiality on the part of the researchers, the estimated amount of time required to complete the survey, and an email address to answer respondents' questions. In an attempt to increase the response rate, the letter included information about a monetary donation that would be made to a national charity for each survey that was completed. The letter was sent to potential participants in two waves, with one week between the distributions. To protect confidentiality, there was no identification to monitor who responded to the first wave and completed surveys, thus an edited version of the initial letter was sent to all doctoral students on the second wave. The revised letter thanked those who had already completed the survey and asked only those who had not yet completed the survey to participate. Two hundred fifty seven female students responded during the first wave and 128 female students responded from the second wave, for a total of 385 female respondents. (The sample was selected from these responses as explained above.)

Responses from the surveys were compiled on surveymonkey.com, the internet company on which the survey was developed. The data were transferred to an excel file format and later transferred to SPSS.

Definitions

Independent Variables

Career Salience: The amount of commitment one has to her career, measured with three variables: preference or not to work even if it is not financially necessary; preference or not for equal roles within the family in respondent's work and family responsibilities; and a new interaction variable created from the first two variables which will be called "work/role equality."

Family Structure: Partnering patterns, the number of children one has, having a child under the age of 6 years or not, and the number of family members in the household.

Family Support: The feelings and experiences of a respondent toward her family members in the past year regarding issues such as emotional support and how close she feels to family members.

Advisor Support: The amount of a student's perceived support from an advisor regarding her work and personal life.

Department Support: The amount of a student's perceived support from students and perceived support from faculty, with questions specifically addressing work and family issues such as priority expectations, time expectations, and sensitivity to childcare and elder care responsibilities.

Presence of Faculty Role Model: The presence or absence of faculty members in the department who are perceived as successfully balancing work and family responsibilities.

Mediating Variables

Family to Work Conflict: “A form of interrole conflict in which the general demands of, time devoted to, and strain created by the family interfere with performing work-related responsibilities” (Netemeyer, Boles, & McMurrian, 1996, 401).

Work to Family Conflict: “A form of interrole conflict in which the general demands of, time devoted to, and strain created by work interfere with performing family-related responsibilities” (Netemeyer et al, 1996, 401).

Dependent Variables

Career Choices: A doctoral student’s intention of career following receipt of the PhD.

Career Choice Change: Whether or not a doctoral student’s intended career path following the receipt of the PhD changed from the time of her entrance to the program to the time of the survey response.

Measures

Data were gathered from the participants using an internet based survey (See Appendix D for the text version). The survey was developed for the specific purpose of this study by the researcher and included a compilation of several instruments.

Demographics

Demographic items collected via the survey include gender, race/ethnicity, age, date entered doctoral program, student status, progress to degree, academic college,

employment status, partner's employment status, primary income earner in the family, relationship status, number of people in the household, number of children, if they have a child under 6 years in their household, and whether or not one's mother worked outside of the home while the participant was growing up.

Measurement of Independent Variables

Career Salience

Career salience is measured using two questions from Hakim's work on the topic (2002). The first asks, "People talk about the changing roles in the family. Here are three kinds of families. Which of them corresponds best with *your* ideas about the family? A.) A family where each of the two partners has an equally demanding job and where housework and the care of the children are shared equally between them; B.) A family where the woman (one partner) has a less demanding job than the husband (second partner) and where she does the larger share of housework and caring for the children; C.) A family where only the husband (one partner) has a job and the wife (second partner) runs the home." Since only one participant reported her preference was C, for the analysis preferred roles related to career salience utilized two groups; 1) preference for equal roles in the family and 2) preference for different roles in the family. The second question asks, "If *without* having to work, your family had what you would regard as a reasonable living income, would you still prefer to have a paid job, or wouldn't you bother? A.) Would still work; B) wouldn't bother working." Multiplying together the two previously mentioned career salience variables creates an interaction variable, a third career salience variable called work/role equality.

Family Support

Family support is measured using Social Support of Family (Procidano & Heller, 1983) and an instrument created by the researcher to measure familial support for work and family balance. The Social Support of Family measure includes 20 statements. For this study, participants had a choice of responses: strongly agree, agree, disagree, and strongly disagree, which varies from the original response anchors of yes, no, and don't know. The Social Support of Family includes items such as "My family gives me the moral support I need" and "Most other people are closer to their families than I am." Cronbach's reliability coefficient for Social Support of Family ranges from .87 (Liu, 2002) to .90 (Waller, n.d.). Four statements created by the researcher address family support for work and family balance including, "I spend more time on home responsibilities (e.g., cleaning, cooking, laundry, bills) than the other adult(s) in my home", "I am satisfied with the way the adult(s) in my home have allocated the house responsibilities", "I spend more time care giving as compared to the other adult(s) in my home", "My family supports my work and pursuit of my doctoral degree." These items are based on the work of Drago & Colbeck (2003) and Mason & Goulden (2002) who, in their studies of faculty members' work and family experiences emphasize the importance of time and feeling supported as crucial to success. For the four statements written by the researcher, participants use the same responses as used in the Social Support of Family Measure. The raw scores were totaled (with negative items reversed, including responses to statements 3, 4, 16, 19, 20, 21, and 23) and responses coded with strongly agree =4, agree=3, disagree=2, strongly disagree=1. Higher scores indicate greater perceived

family support. The possible range of scores for this measure is 24 to 96. The sample's scores range from 40 to 96.

Department Faculty and Peer Support

Academic faculty and peer department support are examined using two measures. One, an adapted instrument by Thompson, Beauvais, and Lyness (1999) measures faculty department support. This 21-item scale originally used a 7-point Likert scale measuring "respondents' perceptions of the overall extent to which their organizations facilitate employees' efforts to balance work and family responsibilities" (Thompson et al., 1999). Cronbach's alpha for the complete scale was .92 (Thompson et al., 1999). The language in the measure was adapted to match terminology in academic departments. For example, "employees" was changed to read "graduate students and faculty" or "graduate students"; "organization" was changed to "department"; "managers" was changed to "faculty." Four questions are excluded in the adapted measure because the expectations in academia differ from those in corporations. For example, "In this organization employees who use flextime are less likely to advance their careers than those who do not use flextime" and "Employees are often expected to take work home at night and/or on weekends." Graduate student and faculty work schedules tend to be more fluid, and thus flextime is not intrinsic to the work expectations for these groups. Working in the evenings and on weekends is expected. Examples of items that are in the measure include: "In my department, faculty and graduate students can easily balance their work and family lives" and "Graduate students are regularly expected to put their work before their families." Participants responded to each of the 17 revised items using a 4 point Likert scale with 4 being strongly agree and 1 being strongly disagree. Responses to

questions 5, 7, 8, 9, 10, 11, 12, and 17 were reversed. The scores for academic faculty department support were obtained by summing the 17 items. Higher scores indicate perceived greater support from faculty. The possible range of scores for this measure is 17 to 68. The sample's range is 27 to 62.

Three questions written by the researcher assess social support of peers in the department, "Doctoral students in my department are sympathetic and supportive of one another," "I rely on other students in my department for emotional support" and "I can count on other students in my department if I need help in solving problems." These items are measured with a 4 point Likert scale ranging from strongly agree (4) to strongly disagree (1). All scores were summed with high scores indicating high peer support. Both the total possible range and the sample's range for this measure is 3 to 12.

Advisor Support, an independent variable, is measured with one subscale from the Survey on Doctoral Education and Career Preparation (Golde & Dore, 2001). This national survey collected information from doctoral students at 27 universities who represent eleven different disciplines. To measure advisor support for this study, "Advisor Behavior" questions were selected, specifically using the subscale measuring the factor, "Personal Touch," which was found to have a reliability coefficient of .90 (Zhao, Golde, & McCormick, 2005). The Personal Touch subscale includes 6 items such as: My advisor and/or mentor in my department... "cares about me as a whole person, not just as a scholar" and "Provides emotional support when I need it." Response anchors include a four point Likert scale ranging from strongly agree (4) to strongly disagree (1). The possible range for this scale is 6 to 24, the same range as is found for the sample.

One question is asked to address role models in the department. “In my department there are role models of faculty who successfully balance work and family.” Possible responses to this statement were categorized from strongly agree (4) to strongly disagree (1). Participants who responded with a 4 or 3 were identified as having a faculty role model who balances work and family and coded as a 1, while participants who responded with a 2 or 1 were identified as not having a faculty role model who balances work and family and were coded as a 0.

Measurement of Mediating Variables

Work and Family Conflict

Family and Work Conflict was measured using the instrument developed by Netemeyer, Boles, and McMurrian (1996). While all statements from the original survey were used, minor revisions were made in response anchors as recommended by Barling et al. (2005). This instrument included 10 items that were divided into two subscales, with five questions addressing family to work conflict (“Things I want to do for school/work don’t get done because of the demands of my family or spouse/partner”, “My home life interferes with my responsibilities at work such as getting to class/work on time, accomplishing daily tasks, and working overtime.”) and five questions addressing work to family conflict (“The demands of my school/work interfere with my home and family life” and “The amount of time school/work takes up makes it difficult to fulfill family responsibilities”). Respondents were asked, “In the past 12 months, how often would you estimate each statement has been true for you” with the choices of: a) 6 to 7 days per week; b) 3 to 5 days per week; c) 1 to 2 days per week; d) 1 to 3 days per month; e) less than once a month; f) never. The authors of this measure designed a research study

specifically to develop work and family conflict scales. The measure was administered to three different samples of respondents. For each of the samples, examining both subscales, Family to Work Conflict measure and Work to Family Conflict measure, alpha coefficients of internal consistency ranged from .82 to .90 (Netemeyer et al., 1996). Responses were coded with “never”=0; “less than once a month”=1; 1 to 3 days per month=2; “1 to 2 days per week”=3; “3 to 5 days per week”=4; “6 to 7 days per week”=5. Raw scores for each subscale were summed, with higher scores indicating more frequent conflict. Scores for each subscale can range from 0 to 25. Sample scores for the subscale work to family conflict range from 1 to 25 while the sample scores for the subscale family to work conflict range from 0 to 25.

Measurement of Dependent Variables

Career Choice: Intent to Pursue a Tenure Track Faculty Position

The dependent variables for this study focused on career choice. Respondents were asked about their intent to pursue tenure track faculty positions upon receiving the PhD degree. They were asked one question measuring their intent to pursue a faculty position at each type of institution, a research I university, a liberal arts university, a community college, and if not interested in a tenure track faculty position. The response options for the statements “When I complete my degree, I am interested in pursuing a tenure track faculty position at a (with one question to address each career option)” included strongly agree=4, agree=3, disagree=2 and strongly disagree=1.

Career Choice Change

At the beginning of the survey, participants were asked a question regarding what their career intentions were when they started their doctoral program. One question was

asked for each type of university (research I, liberal arts, community college), and a fourth question asked if they did not intend to pursue an academic career. An example question reads, “When I entered my doctoral program, I was interested in pursuing a tenure track faculty position at a research I university upon completing my degree.” This response was compared to their response to a question near the end of the survey in which respondents were asked to report their current career intentions upon completing their degree. For example, “When I complete my degree, I am interested in pursuing a tenure track faculty position at a research I university.” Response anchors for both sets of questions are strongly agree=4; agree=3; disagree=2; strongly disagree=1. The response to the first question (career intentions when they began their program) was subtracted from the response to the second question (current career intentions) for each type of university to obtain a career choice change score. For example, a respondent who “disagreed” with the statement that she intended to pursue a research I faculty position when she started her program was coded as a 2. If that same respondent reports that she “strongly agrees” that she currently intends to pursue a research I faculty position, that response is coded as a 4. Her first response (2) is subtracted from her second (4) to obtain a 2 for her career choice change score for research I universities.

Another question asked participants to rank their interest in different types of institutions, “Please rank your interest in each of these positions from 1-4, meaning that 1 would be your first choice and 4 would be your last choice, or mark not applicable if none of the responses match your interests.” The five choices included tenure track positions at three types of institutions, an adjunct university position, and not applicable. The responses to this question were used for hypotheses 2.5, 2.7, 2.9, 4.3, and 4.6.

Control Variables

Control variables included age, race/ethnicity, and field/college. To gather data on age, respondents were asked the year they were born. The variable age was created from this question by subtracting respondents' year of birth from the current year. The responses were placed into ordinal categories including: 1) 29 years and younger; 2) 30-34 years; 3) 35-39 years; 4) 40-44 years; 5) 45 years and older. The category 29 years and younger included a large number of respondents, however this was not broken down into an additional 5 year increment (such as 20-24, 25-29 years) because fewer than 10 respondents were under 25 years old.

For the control variable race, respondents were asked, "How would you describe your race or ethnicity?" with the response options White/Caucasian, Black/African American, Latina/o, Asian American, Native American, and Other. Due to the high number of respondents who were White/Caucasian and the low number of respondents who identified as members of racial/ethnic groups other than Black/African American, three race/ethnicity categories were used, including White/Caucasian, Black/African American, and other racial/ethnic groups. Dummy variables were created, to compare White/Caucasians to all other respondents and the second to compare Black/African Americans to all other respondents.

For the control variable college, students were asked to report the college in which they were enrolled. Respondents could select one college from a drop down list that included all 13 colleges. The initial expectation was to include colleges as a control variable, however due to small sample size representation in some colleges, those in similar fields were collapsed together to create the variable "field" which included 4

categories: education, liberal arts, science, and other. Dummy variables were created to be included in the analyses.

Data Analysis

Descriptive statistics including frequencies, means, and standard deviations are used to summarize the demographic data and the appropriate independent variables. Cronbach's alphas are utilized to identify the internal consistency among the various measures within the study, including *The Family Support Scale*, the *Academic Department Support Scale*, the *Advisor Support Scale*, the *Academic Department Peer Support Scale* and the subscales of *Work to Family Conflict* and *Family to Work Conflict*. Correlations, examining the relationships among all independent variables in the study, are computed and presented in a correlation matrix.

Multiple regression analyses test the relative strength of the independent variables: individual variables (career salience) family variables (relationship status, number of kids, age of kids, family support) and academic department variables (department peer support, department faculty support, advisor support, and department role models) (control variables are also entered into the analysis), predicting each of the intended dependent variable career paths, including tenure track faculty positions at: 1) research I universities; 2) liberal arts colleges; 3) community colleges; and 4) non-tenure track positions. These regressions test research question 1 and hypotheses: 1.1, 2.1, 2.2, 2.3, 2.10, 3.1, 3.3, 3.5, and 3.7.

Multiple regressions are used to examine the effects of the mediating variables 1) work to family conflict and 2) family to work conflict for each type of institution. To best test the affects of mediating variables, three regression equations are conducted: 1) the

mediating variables on the predictor variables; 2) the dependent variables on the mediating variables; 3) the dependent variables on the predictor and mediating variables. For a mediator relationship to exist, significant relationships must exist in each of these regressions. Also, for the work and family conflict variables to be true mediators, in the third regression analysis, including both independent and mediator variables, the independent variables' effects have to be less than they were when the dependent variable was regressed only on the independent variables (Baron & Kenny, 1986). These regression analyses test research question 2 and hypotheses 4.1 and 4.4.

To test research question 2, the independent variables in the conceptual model are used in a set of regressions, with career change scores as the dependent variables. Each type of university is included in a separate regression. For example, the Research I university change scores are regressed on the independent variables, followed by liberal arts universities change scores, followed by the community college change scores, followed by the no intention of an academic job change scores.

T-tests for independent samples test hypotheses are used to test differences between means of two groups. Pearson's chi-square analysis tests relationships between two discrete variables. Differences between groups are analyzed for most of the predictor variables. For example, for the variable family support, a cut point is determined following the initial analysis which splits this group into low and high family support. The means are compared between these groups for the variable "intent to pursue a tenure track faculty position" to see if there is a significant difference between these groups. T-tests for independent samples or chi-square analyses are used to analyze hypotheses: 1.2, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.11, 3.2, 3.4, 3.6, 3.8, 4.2, 4.3, 4.5, 4.6, 5.1, 5.2, and 5.3.

Missing Data

As mentioned previously, respondents who did not complete the survey beyond basic demographic information were dropped from the study as they did not provide data that were useful for the analysis. For respondents who intermittently did not complete certain survey items, listwise means substitution was used for the data analysis. The reported results of some of the demographic data include minor differences in the sample total (Ns), as missing data were not substituted for these items.

Chapter 4

Results

Demographic Characteristics

A total of 273 women completed the survey (n=273). As presented in Table 1, the sample is comprised largely of White/Caucasian participants (81.7%), but also includes those who identified as Black/African-American (8.8%), Asian-American (2.9%), Latina (3.7%) and “other” races/ethnicities (2.9%). Participants’ ages span 42 years, ranging from 23 to 64 years old, with an average age of 34 years ($SD = 8.987$). The majority (66.2%) are ages 24-34 years.

Participants started their doctoral programs between 1998 and 2005. The highest number entered their programs in 2003 (20.5%) followed by 2005 (17%), 2002 (16.3%), and 2004 (14.8%). More than three-fourths of participants are full-time students (75.5%). The majority of women are working on their dissertations (54.6%), whereas almost one third are still taking classes (30%). While all of the colleges within the university are represented, over one third of the sample are in the College of Education (35.5%) and approximately one fifth are in the College of Arts and Humanities (20.2%). Fewer than five participants are in each of the Colleges of Business (1.5%), Information Studies (1.5%), Public Policy (1.3%) and Architecture (.4%).

Only 13.2% of students report they do not work for pay. Weekly, 42.5% of participants work 11-29 hours for pay, 31.9% work 30 hours or more for pay, with only 12.5% working 1-10 hours for pay. Almost two-thirds (61.9%) of participants report their moms, at some time while they were growing up, worked full-time for pay outside of the home, while more than one-quarter (25.3%) report their moms worked part-time for pay

outside of the home. Most participants have partners who work full-time (82.5%). A little over half report that their partners are the primary income earners of the family (52.4%), while more than a quarter report they are both jointly primary income earners (27.1%).

More than two thirds of the participants are married (68.1%), and almost one quarter are partnered (24.5%). The number of people reported in households ranged from 1-7. The majority report having two people in their household (56.8%). While respondents' number of children ranged from 0-7, less than one-third have children (29.4%), and only 15.4% have a child under six years old. A total of 86.3% of those with children are married, 7.5% are divorced, 5% are single, and 1.25% are separated.

Table 1

Demographic Characteristics	<u>M</u> (<u>SD</u>) or <u>N</u> (%)	Range
Race (N=273)		
Asian American	8 (2.9%)	
Black/African-American	24 (8.8%)	
Latina	10 (3.7%)	
White/Caucasian	223 (81.7%)	
Other	8 (2.9%)	
Age (N=273)	34 (9.0)	23 to 64 years
Younger than 29 years	108 (39.7%)	
30-34 years	72 (26.5%)	
35-39 years	33 (12.1%)	
40-44 years	14 (5.1%)	
45 years or older	45 (16.5%)	
Year Entered Doctoral Program (N=264) (missing N=9)		1998 to 2005
2005	45 (17%)	
2004	39 (14.8%)	
2003	54 (20.5%)	
2002	43 (16.3%)	
2001	30 (11.4%)	
2000	27 (10.2%)	
1999	10 (3.8%)	
1998	16 (6.1%)	

Demographic Characteristics	<u>M (SD)</u> or <u>N (%)</u>	Range
Student Status (N=273)		
Full-Time	206 (75.5%)	
Part-Time	67 (24.5%)	
Progress to Degree (N=273)		
Working on Dissertation	149 (54.6%)	
Taking Classes	82 (30%)	
Studying for Comprehensive Examination	25 (9.2%)	
Other	17 (6.2%)	
Colleges in Which Students are Enrolled (N=273)		
Education	97 (35.5%)	
<i>Education</i>	97 (35.5%)	
Liberal Arts	88 (32%)	
<i>Arts and Humanities</i>	55 (20.2%)	
<i>Behavior and Social Sciences</i>	32 (11.7%)	
<i>Architecture, Planning, Preservation I</i>	1 (.4%)	
Science	56 (20.6%)	
<i>Computer, Math & Phys. Sciences</i>	12 (4.4%)	
<i>Chemical and Life Sciences</i>	23 (8.4%)	
<i>Engineering</i>	12 (4.4%)	
<i>Agriculture and Natural Resources</i>	9 (3.3%)	
Others	32 (11.8%)	
<i>Business</i>	4 (1.5%)	
<i>Health and Human Performance</i>	21 (7.7%)	
<i>Information Studies</i>	4 (1.5%)	
<i>Public Policy</i>	3 (1.3%)	
Weekly Hours Employed for Pay (N=273)		
1 to 10 hours	34 (12.5%)	
11-29 hours	116 (42.5%)	
30 hours or more	87 (31.9%)	
Do not work for pay	36 (13.2%)	
While Growing Up, Mom's Paid Work Outside of the Home (N=273)		
Full-time	169 (61.9%)	
Part-time	69 (25.3%)	
No	35 (12.8%)	
Partner's Paid Employment Outside of the Home (N=273)		
Full-time	225 (82.5%)	
Part-time	14 (5.1%)	

Demographic Characteristics	M (SD) or N (%)	Range
Does Not Work for Pay	15 (5.5%)	
Not Applicable	19 (7%)	
Primary Income Earner in Household (N=273)		
I Am	52 (19%)	
My Spouse/partner	143 (52.4%)	
Both My Spouse and Myself Jointly	74 (27.1%)	
Someone Else	4 (1.5%)	
Relationship Status (N=273)		
Divorced	13 (4.8%)	
Married	186 (68.1%)	
Partnered	67 (24.5%)	
Separated	3 (1.1%)	
Single	4 (1.5%)	
Number of People in Household (N=264) (missing N=9)	2.22 (1.03)	1-7
One	48 (18.2%)	
Two	150 (56.8%)	
Three	36 (13.6%)	
Four	22 (8.3%)	
Five	4 (1.5%)	
Six	3 (1.1%)	
Seven	1 (.4%)	
Number of Children (n=273)	.55(1.04)	0-7
None	193(70.7%)	
One	35(12.8%)	
Two	31(11.4%)	
Three or More	14(5.2%)	
A Child Under 6 Years in the Household (n=273)		
Yes	42(15.4%)	
No	231(84.6%)	

Study Measures: Mean Scores, Standard Deviations and Reliability

Mean scores, standard deviations, and median cut points were determined for each measure. Internal consistency was computed for all scales (See Table 2). Total

family support's mean score is 75.43 (SD=10.29) and the median cut point is 75. Those with a summed score below 75 are labeled with low family Support, and those with summed scores 75 and above are labeled with high family support. The alpha for family support, including both the Social Support of Family scale and the four additional family support questions for work and family balance was .92. The mean for the scale measuring department faculty support is 45.64 (SD=6.42) with a median cut point of 46. Those with summed scores below 46 are labeled with low department social support, and those with summed scores 46 and above are labeled with high department social support. The alpha for faculty department support is .89. For peer department support, the mean score is 9.43 (SD=2.02) and the median cut point is 9. Those with scores below 9 are labeled with low peer support and those with scores of 9 or above are labeled with high peer support. The internal consistency alpha for this measure is .86. Advisor's support mean score is 17.02 (SD=4.) with a median cut point of 18. Those with summed scores below 18 are labeled with low advisor support, and those with summed scores 18 and above are labeled with high advisor support. The alpha for the advisor support scale is .89. Netemeyer, Boles, and McMurrian's (1996) measure with adapted responses resulted in the five work to family conflict questions with a mean score of 15.71 (SD=5.33) and a .92 alpha. The family to work conflict subscale mean is 9.94 (SD=5.74) and the internal consistency alpha coefficient is .90. All of the reliability coefficients are in an acceptable range.

Table 2
Scores and Coefficient Alphas for Study Measures

Measure	Possible Range	Sample Range	Mean	Standard Deviation	Coefficient Alpha
<i>Independent Measures</i>					
Family Support	24-96	40-96	75.43	10.29	.92
Department Support	17-68	27-62	45.64	6.42	.89
Peer Support	3-12	3-12	9.43	2.02	.86
Advisor Support	6-24	6-24	17.02	4.0	.89
<i>Mediating Measures</i>					
Work to Family Conflict	0-25	1-25	15.71	5.33	.92
Family to Work Conflict	0-25	0-25	9.94	5.74	.90

Dependent Variables Description

One group of outcome variables measured students' intentions of pursuing a tenure track position when they receive their degrees at each of three types of universities, research I, liberal arts, community colleges, or no intent to seek a tenure track position (see Table 3). Interest in pursuing one type of institution did not preclude interest in other institutions. For example, a respondent could mark "strongly agree" for interest in pursuing positions at research I universities, liberal arts universities, and community colleges. Liberal arts universities was the only type of institution in which the majority reported they strongly agreed or agreed that they currently intend to pursue a tenure track position at that site, a total of 55.3%, while 37% strongly agreed or agreed

they intend to pursue tenure track positions at research I universities and 27.5% strongly agreed or agreed with their intent to pursue a community college position.

Another primary outcome variable examined students' changes in career intentions (see Table 3). This career choice change score was determined by subtracting responses regarding their intent for seeking each type of position when they entered their doctoral program, from their current intentions for each type of position when seeking employment upon receipt of the doctoral degree. Scores from these calculations were labeled career choice change. The mean change scores are positive for interest in pursuing positions at liberal arts universities (.03), community colleges (.12), as well as not interested in pursuing a tenure track faculty position (.10), indicating that on average, respondents may be more likely to agree or strongly agree they are interested in these career choices at the end of their program than when they entered the program. Research I tenure track position is the only variable to have a negative mean score (-.13), suggesting respondents' interest in pursuing research I tenure track positions at the completion of their degree may have decreased when compared to respondents' interest in research I positions when they started their programs. Paired samples t-tests compared the means scores between career intentions when respondents entered their program and means scores for current career intentions for each type of institution. For research I universities, program entrance career intent scores ($M=2.35$, $SD=.98$) were significantly higher than current career intent scores ($M=2.22$, $SD=.96$), $t(272)=2.29$, $p<.05$, suggesting respondents have significantly decreased their intentions of pursuing tenure track faculty positions at research I universities over the course of time in their programs. A paired samples t-test also found significant differences for intentions to pursue

community college positions. Program entrance career intent scores ($M=1.85$, $SD=.82$) were significantly lower than current career intent scores ($M=1.97$, $SD=.82$), $t(272)=-3.43$, $p<.01$, suggesting respondents have significantly increased intentions of pursuing tenure track faculty positions at community colleges over the course of time in their programs.

Table 3
Descriptive Data for Dependent Variables

Variable	M (SD)	Range	N (%)
<i>Intent to pursue tenure track positions upon entering doctoral program</i>			
Research I University (N=273)	2.35 (.98)	1-4	
Strongly Agree			40 (14.7%)
Agree			76 (27.8%)
Disagree			97 (35.5%)
Strongly Disagree			60 (22%)
Liberal Arts University (N=273)	2.52 (1.06)	1-4	
Strongly Agree			58 (21.2%)
Agree			87 (31.9%)
Disagree			68 (24.9%)
Strongly Disagree			60 (22%)
Community College (N=273)	1.85 (.82)	1-4	
Strongly Agree			8 (2.9%)
Agree			51(18.7%)
Disagree			107 (39.2%)
Strongly Disagree			107 (39.2%)
No Intent Faculty Position (N=273)	2.32 (1.12)	1-4	
Strongly Agree			56 (20.5%)
Agree			58 (21.2%)
Disagree			74 (27.1%)
Strongly Disagree			85 (31.1%)

Variable	<u>M (SD)</u>	<u>Range</u>	<u>N (%)</u>
<i>Current intent to pursue tenure track positions upon completing degree</i>			
Research I University (N=273)	2.22 (.96)	1-4	
Strongly Agree			29 (10.6%)
Agree			72 (26.4%)
Disagree			99 (36.3%)
Strongly Disagree			73 (26.7%)
Liberal Arts University (N=273)	2.55 (1.01)	1-4	
Strongly Agree			53 (19.4%)
Agree			98 (35.9%)
Disagree			67 (24.5%)
Strongly Disagree			55 (20.1%)
Community College (N=273)	1.97 (.82)	1-4	
Strongly Agree			7 (2.6%)
Agree			68 (24.9%)
Disagree			109 (39.9%)
Strongly Disagree			89 (32.6%)
No Intent Faculty Position (N=273)	2.41 (1.02)	1-4	
Strongly Agree			47 (17.2%)
Agree			74 (27.1%)
Disagree			89 (32.6%)
Strongly Disagree			63 (23.1%)
<i>Career Choice Change Scores (N=273)</i>		1-4	
Research I University	-.13 (.94)	(-3) to 3	
Liberal Arts University	.03 (.83)	(-3) to 3	
Community College	.12 (.58)	(-2) to 2	
No Intent for Faculty Position	.10 (.98)	(-3) to 3	

Bivariate Relationships Among Study Predictor Variables

Table 4 presents the bivariate relationships among predictor variables. These correlations are measured to test for multicollinearity (Hinton, 1995). Significant relationships among independent variables exceeding .80 indicate that a problem of multicollinearity may exist (Garson, 2006). Because of the different types of variables

used in this research project (dichotomous, ordinal, interval), different methods are utilized to examine correlations among variables, including Phi Coefficients for nominal data, Gamma coefficients for ordinal variables, Eta coefficients to examine correlations between nominal and interval data, and Pearson Product Moment for interval variables. The results indicate several significant relationships exist among predictor variables.

The career salience work/role equality variable is highly significantly correlated with each of the two original career salience predictors, work preference ($r=.7, p<.01$) and preference or not for equal roles ($r=.7, p<.01$). Women who report preferring to work (career salience variable) even if it is not financially necessary, are more likely to report they do not have a child under 6 years old ($r=-.12, p<.05$). Equal role preference significantly, negatively correlates with relationship status married ($r=-.19, p<.01$) and with relationship status partnered ($r=-.13, p<.05$). The career salience work/role equality variable is also negatively, significantly correlated with relationship status married ($r=-.14, p<.05$) and relationship status partnered ($r=-.13, p<.05$). Those who report preferences for career salience (preferring equal roles and work/role equality) are less likely to report current involvement in a significant relationship. Married respondents are more likely to have a child under the age of 6 ($r=.27, p<.01$). The number of children is significantly positively correlated with advisor support ($r=.14, p<.05$). Among the support variables, family support is positively, significantly correlated with department support ($r=.14, p<.05$). Advisor support is significantly, positively correlated with both department faculty support ($r=.43, p<.01$) and department peer support ($r=.14, p<.05$), indicating that those who report positive support experiences in their department are likely to perceive support from multiple sources, including an advisor, faculty, and peers.

Having a role model is significantly, positively correlated with department faculty support ($r=.42$, $p<.05$) and advisor support ($r=.29$, $p<.05$). Amount of time in their academic program was not significantly correlated with any of the predictor variables. Although significant relationships exist among predictor variables, none exceed the .80 cutoff, indicating less likelihood of multicollinearity and thus all variables are included in the regression analyses.

Table 4
Bivariate Relationships between Predictor Variables

Vars	WP	ER	WRE	RSM	RSP	NC	AC	FM	DP	GD	AD
WP											
ER	.12										
WRE	.7**	.7**									
RSM	-.03	-.19**	-.14*								
RSP	-.056	-.13*	-.13*	.41**							
NC	.01	.02	.03	.19	.15						
AC	-.12*	-.04	-.05	.27**	.08	.34					
FM	.10	.06	.11	.27	.18	.08	.05				
DP	.00	.04	.04	.13	.01	.06	.07	.14*			
GD	.05	.12	.13	.10	.02	.01	.06	.11	.11		
AD	.02	.01	.01	.07	.001	.14*	.12	.10	.43**	.14*	
RM	.08	-.02	.02	.01	-.01	.02	-.03	.06	.42*	.19	.29*
AT	-.06	.02	-.06	-.03	.01	.09	-.03	.01	.09	.11	.05

WP=Career Salience Work Preference; ER=Career Salience Equal Roles Preferred; WRE=Work/Role Equality.; RSM=Relationship Status Married; RSP=Relationship Status Partnered; NC=Number of Children; AC=A Child under 6 Years; FM=Family Support Measure; DP=Department Support Measure; GD=Peer Support from Grad Students Measure; AD=Advisor Support Measure; RM=Role Model; AT=Amount of Time in Doctoral Program Comparing Less Than One Year to Others

* $p<.05$. ** $p<.01$

Hypotheses Predicting Group Differences

T-tests for independent samples or Pearson's chi-square analysis are used to measure differences between groups. Findings of the analyses are reported below, beginning with

findings from individual level variables, followed by family variables, department variables, and mediator variables. Several hypotheses (1.1, 2.1, 2.2, 2.3, 2.10, 3.1, 3.3, 3.5, 3.7, 4.1, 4.4) predicted specific variables would be significant predictors in the research model. The findings from the regression analyses are reported in the section titled *Regression Models* which follows the current section.

Individual Variables

Hypothesis 1.2 predicted women with high career salience would be more likely to report intent to pursue a tenure track faculty position than those women with low career salience. This hypothesis was tested using the work/role equality variable. Respondents who preferred work/role equality were significantly more likely to report intent to pursue a research I position ($M=2.32$, $SD=.95$) than those who did not report preference for work/role equality ($M=2.0$, $SD=.94$), $t(271)=2.58$, $p<.05$. Additionally, respondents who preferred work/role equality ($M=2.32$, $SD=.99$) were significantly less likely to report no intent to pursue tenure track positions than those who did not report preference for work/role equality ($M=2.6$, $SD=1.05$), $t(271)=2.22$, $p<.05$. For the other dependent variables, liberal arts universities and community colleges, t -tests did not show a significant difference between women with high career salience and those with low career salience.

Family Variables

Hypothesis 2.4 stated that women who have children would be less likely to report intent to pursue a tenure track faculty position than all other women. The two groups, women with children and women without children, were compared, with each of the dependent variables intent to pursue each of the tenure track positions. The two groups

did not significantly differ on their intent to pursue tenure track faculty positions at any institutions. The hypothesis was not supported.

Hypothesis 2.5 stated that women with children who intend to pursue a tenure track faculty position would be more likely to identify their first choice for positions at a liberal arts or community college than those without children. Chi-square analysis revealed that women who have a child are not significantly more likely to prefer a liberal arts or community college position over a research I position than those without children. Thus hypothesis 2.5 was not supported.

Hypothesis 2.6 stated the presence and age of children would be a significant predictor in the likelihood of pursuing a tenure track faculty position. The questions asking how many children a respondent has and age of youngest child were used to create a new variable that determined whether or not the respondent has a child under the age of 6. The results suggest those with a child under age 6 did not significantly differ from those with no child under age 6 in their intent to pursue a tenure track faculty position. Hypothesis 2.6 was not supported.

Hypothesis 2.7 stated that women with at least one child under age 6 who intend to pursue a tenure track faculty position will be more likely to identify their first choice for positions are at liberal arts or community colleges than all other women. Chi-square analysis revealed that women who have a child under age 6 are not significantly more likely to prefer liberal arts or community colleges over research I positions when compared to all other women. Hypothesis 2.7 was not supported.

Hypothesis 2.8 stated women with two or more children in the household would be less likely to report intent to pursue a tenure track faculty position than women with one

child. The two groups did not differ significantly on their intent to pursue tenure track faculty positions and any of the institution types. Hypothesis 2.8 was not supported.

Hypothesis 2.9 stated women with two or more children who intend to pursue a tenure track position would be more likely to identify their first choice for positions as a liberal arts or community college than those with one child. Chi-square analysis revealed that women with two or more children are not significantly more likely to prefer a liberal arts or community college position over a research I position when compared to women with one child. Thus, hypothesis 2.9 was not supported

Hypothesis 2.11 stated women with higher levels of family social support will be more likely to report intent to pursue a tenure track faculty position than those reporting lower levels of family social support. Respondents were split into groups of high/low family support based on the median cut point and compared using independent samples t-test with each type of institution and no intent to pursue a tenure track position. Respondents with low family support were significantly more likely to report no intent to pursue tenure track positions ($M=2.57$, $SD=.96$) than those with high family support ($M=2.26$, $SD=1.07$), $t(265)=2.50$, $p<.05$. For the other dependent variables research I universities, liberal arts universities, and community colleges, t-tests did not show a significant difference between women with high family support and those with low family support.

Department Variables

Hypothesis 3.2 stated women with higher levels of reported peer social support would be more likely to report intent to pursue a tenure track faculty position than those with lower levels of peer support. Respondents were split into two groups using the median

cut point from the summed total of the three questions measuring peer support. The two groups were compared using independent samples t -test on the variables intent to pursue a tenure track position at each type of institution and no intent to pursue tenure track positions. The results suggest those with high peer social support do not significantly differ from those with low peer social support in their intent to pursue faculty positions. Hypothesis 3.2 was not supported.

Hypothesis 3.4 stated women with higher levels of reported faculty support for work and family balance will be more likely to report intent to pursue a tenure track faculty position than those with lower levels of faculty support. Respondents were split into two groups using the median cut point from the summed total of the seventeen questions measuring department faculty support. Independent samples t -test using the variables intent to pursue a tenure track position at each type of institution and no intent to pursue tenure track positions suggest that women with high faculty support do not significantly differ from those with low faculty support in their career intentions, thus hypothesis 3.4 was not supported.

Hypothesis 3.6 proposed women with higher levels of advisor/mentor support would be more likely to report intent to pursue a tenure track faculty position than those reporting lower levels of support. Respondents were split into two groups using the median cut point from the summed total of the six questions measuring advisor support. The two groups were compared using independent samples t -test on the variables intent to pursue a tenure track position at each type of institution and no intent to pursue tenure track positions. No significant differences were found between women with high advisor

support and women with low advisor support in their intent to pursue tenure track faculty positions. Hypothesis 3.6 was not supported.

Hypothesis 3.8 stated women with at least one faculty role model who maintained perceived desirable work/family balance would be more likely to report intent to pursue a tenure track faculty position than those who do not have such a role model. Women were split into two groups, comparing those who agreed and those who disagreed that they had a role model. The two groups did not significantly differ on their intent to pursue tenure track faculty positions at any institutions. Thus, hypothesis 3.8 was not supported.

Mediating Variables

Hypothesis 4.2 stated women with higher levels of work to family conflict will be less likely to report intent to pursue a tenure track faculty position than those reporting lower levels of work to family conflict. The scores from the five questions measuring work to family conflict were summed and a median cut point was used to split respondents to two groups, those with high and those with low work to family conflict. The two groups were compared using independent samples t-test with the dependent variables intent to pursue faculty positions at each type of institution and no intent to pursue tenure track faculty positions. No significant differences were found between respondents with high work to family conflict and respondents with low work to family conflict in their intent to pursue faculty positions. Thus, hypothesis 4.2 was not supported.

Hypothesis 4.3 stated women with higher levels of work to family conflict who intend to pursue a tenure track faculty position would be more likely to identify their first choices for positions at liberal arts or community colleges in contrast to those with lower

levels of work to family conflict. Pearson's chi-square analysis revealed no significant differences between these groups. Hypothesis 4.3 was not supported.

Hypothesis 4.5 stated women with higher levels of family to work conflict would be less likely to report intent to pursue a tenure track faculty position than those reporting lower levels of work to family conflict. The scores from the five questions measuring family to work conflict were summed and a median cut point was used to split respondents to two groups, those with high and those with low work to family conflict. The two groups were compared using independent samples t-test with the variables intent to pursue faculty positions each type of institution and no intent to pursue tenure track faculty positions. The two groups did not differ significantly on their intent to pursue tenure track positions at any type of institution, thus hypothesis 4.5 was not supported.

Hypothesis 4.6 stated women with higher levels of family to work conflict who intend to pursue a tenure track faculty position would be more likely to identify their first choices for positions at liberal arts or community colleges in contrast to those with lower levels of family to work conflict. Pearson's chi-square analysis revealed no significant differences between groups. Hypothesis 4.6 was not supported.

Career Choice Change

Hypothesis 5.1 stated women with children who entered their doctoral program with intent to pursue a tenure track faculty position would be more likely to have a career choice change than those women without children. Independent samples t-test comparing the two groups found no significant differences between groups in their career choice change scores for intent to pursue any type of university. Hypothesis 5.1 was not supported.

Hypothesis 5.2 stated women with low family support who entered their doctoral program with intent to pursue a tenure track position would be more likely to have career choice change than those women with high family support. A comparison using independent samples t-test found no significant differences between women with low family support and women with high family support on their career choice change scores for any type of institution. Hypothesis 5.2 was not supported.

Hypothesis 5.3 stated women with low department support who entered their doctoral program with intent to pursue a tenure track position will be more likely to have career choice change than those women with high department support. The two groups did not significantly differ on their change scores for any type of institution.

Regression Models

A major goal of this research was to determine factors that may be related to graduate students' likelihood of pursuing tenure track faculty positions at research I universities, liberal arts universities, and community colleges. Multiple linear regression was used to explore significant relationships between the independent variables and the dependent variables intent to pursue tenure track positions at each type of institution. Additional regressions were also conducted with the mediating variables and the dependent variable intended career path. Finally, multiple linear regressions were run to explore the affects of the independent variables on career choice change scores for each type of university. Each regression model was run with forward selection using .10 as the probability of F-to-enter (PIN). To check for accuracy and consistency, each regression model was also run with backward elimination using .15 as the F-to-remove probability criteria. The regressions were reviewed and for each of the types of universities and

career choice change regressions, both the forward selection and backward elimination methods resulted in the same models, meaning the same variables were identified as significant. Results of the forward selection regressions are reported here.

The following sections report the findings that answer each of the research questions and hypotheses 1.1, 2.1, 2.2, 2.3, 2.10, 3.1, 3.3, 3.5, 3.7, 4.1, and 4.4. The hypotheses articulate the research questions by stating the expectation that each predictor and mediating variable will have significant relationships in the model. The findings are organized by type of institution, beginning with results for tenure track position intentions at research I universities, followed by liberal arts universities, community colleges, and finally students who do not intend to pursue a tenure track position.

Research Questions and Findings

- 1) *How much do each of the independent variables (individual, family and academic department variables account for the variance of each of the dependent variables (intended career paths)?*
- 2) *What affects do independent variables (individual, family, and academic department variables) have on the dependent variable intended career choice change?*

Intent to Pursue Research I University Tenure Track Positions

Table 5 presents the results of the multiple linear regression using forward selection to examine intent to pursue tenure track positions at research I universities. The results of the model with the greatest number of significant variables are presented. The overall model's adjusted R square is .062, $F(1, 244) = 5.118$, $p < .05$. This model explains 7% of the variance. The career salience variable asking about preference to work even if the respondent's family had what she considered a reasonable living income ($B = .56$,

$p < .01$) and the relationship status married variable ($B = -.297$, $p < .05$) are significant.

Women who prefer to work, whether or not it was financially necessary, are more likely to report intent to pursue a research I faculty position, and women intending to pursue research I positions are less likely to be married. This finding supports hypotheses 1.1 and 2.1 that career salience and relationship status are significant predictors in explaining the pursuit of a tenure track faculty position.

The multiple linear regression model testing the relationships between the independent variables and the dependent variables career choice change scores for intent to pursue a research I university position again has a significant relationship with the career salience variable preference to work ($B = .497$, $p < .01$), thus supporting hypothesis 1.1 that career salience will be a significant predictor. The control variable age is also significant in the model ($B = .090$, $p < .05$). The adjusted R square for this model was .049, $F(1, 248) = 4.692$, $p < .05$ and the model explained 6% of the variance. Women who report a preference to work and women who are older are more likely to have an increase of interest in pursuing tenure track positions between the time they started their program and their current interest.

Table 5
Regression Analyses Examining Independent and Control Variables Relationships to
Intent to Pursue Research I University Tenure Track Positions and Career Choice Change
Scores for Research I Universities

Variables	Beta	Standard Error	p
<i>5.1 Significant Independent Predictors:</i>			
<i>F (1,244) =5.118, p<.05; R square=.070; Adjusted R square=.062</i>			
Career Salience: Preference to Work	.56	.157	.001
Relationship Status: Married	-.297	-.140	.025
<i>5.2 Career Choice Change</i>			
<i>F (1, 248) =4.692, p<.05, R square=.057; Adjusted R square=.049</i>			
Career Salience: Preference to Work	.497	.154	.001
Age	.090	.042	.031

Intent to Pursue Liberal Arts University Tenure Track Positions

Table 6 presents the results of the multiple linear regression using forward selection to examine intent to pursue tenure track positions at liberal arts universities. The results of the model with the greatest number of significant variables are presented. The overall model's adjusted R square is .088, $F(1,242) = 4.711$, $p < .05$. This model explains 10% of the variance. Family support ($B = .014$, $p < .05$) and advisor support ($B = .031$, $p = .053$) have significant positive relationships and the relationship status married ($B = -.353$, $p < .05$) has a negative significant relationship with intent to pursue liberal arts university positions. The control variable field, specifically liberal arts/social science fields ($B = .551$, $p < .001$) is also positively associated. Graduate students who reported greater support from family and from their advisors were more likely to report intent to pursue liberal arts university positions. Students pursuing these positions were less likely to be married and more likely to be in liberal arts/social science fields. This finding

supports the hypotheses 2.1, 2.10, and 3.5, that relationship status, family support, and advisor support are significant predictors in explaining pursuit of tenure track faculty positions.

The multiple linear regression model testing the relationships between the independent variables and the dependent variables career choice change scores for intent to pursue a liberal arts university position suggests a positive significant relationship ($B=.237, p<.05$) with the work/role equality variable. Graduate students in this sample who both prefer to work and desire equal roles with their partners are likely to report increased interest in pursuing liberal arts faculty positions between the time they started their program and their current interest.

Table 6
Regression Analyses Examining Independent and Control Variables Relationships to Intent to Pursue Liberal Arts University Tenure Track Positions and Career Choice Change Scores for Liberal Arts Universities

Variables	Beta	Standard Error	p
<i>6.1 Significant Independent Variables:</i>			
<i>F (1,242) =4.711, p<.05; R square=.103; Adjusted R square=.088</i>			
Relationship Status: Married	-.353	-.142	.014
Family Support	.014	.006	.031
Advisor Support	.031	.016	.053
<i>5.1 Significant Control Predictor</i>			
Field: Liberal Arts/Social Science	.551	.138	.000
<i>6.2 Career Choice Change</i>			
<i>F (1, 249) =4.652, p<.05, R square=.018; Adjusted R square=.014</i>			
Career Salience: Work/Role Equality:	.237	.110	.032

Intent to Pursue Community College Tenure Track Positions

Table 7 presents the results of the multiple linear regression using forward selection to examine intent to pursue tenure track positions at community colleges. The results of the model with the greatest number of significant variables are presented. The overall model's adjusted R square is .028, $F(1,244) = 8.011$, $p < .01$. This model explains 3.2% of the variance. The only significant variable in this model is the control variable field: specifically those in liberal arts/social sciences ($B = .328$, $p < .01$) fields. Graduate students in the liberal arts/social science field are more likely than others in the sample to report intent to pursue community college positions. This regression analysis provided no support for any of the hypotheses.

There are no significant relationships when career choice change scores for community colleges are regressed on the predictor and control variables.

Table 7
Regression Analyses Examining Independent and Control Variables Relationships to Intent to Pursue Community College Tenure Track Positions and Career Choice Change Scores for Community Colleges

Variables	Beta	Standard Error	p
<i>7.1 Significant Variables:</i>			
<i>F (1,244) = 8.011, p < .005; R square = .032; Adjusted R square = .028</i>			
<i>Significant Control Predictor</i>			
Field: Liberal Arts/Social Science	.328	.116	.005

No Intent to Pursue Tenure Track Positions

Table 8 presents the results of the multiple linear regression using forward selection to examine no intent to pursue tenure track positions. The results of the model

with the greatest number of significant variables are presented. The overall model's adjusted R square is .076, $F(1,242) = 3.881$, $p = .05$. This model explains 9% of the variance. Family support ($B = -.015$, $p < .05$) and having a role model ($B = -.280$, $p = .05$) are negative significant predictors in the regression equation. The control variable field, specifically liberal arts/social sciences ($B = -.579$, $p < .001$) also has a significant negative relationship with no intent to pursue tenure track positions. Graduate students in the sample who are more likely to report that they do not intend to pursue tenure track positions are also likely to have less family support, no faculty member in their department who they perceive as a role model, and are less likely to be in the liberal arts/social science fields. This analysis supports hypotheses 2.10 and 3.7 as limited family support and the presence or not of a role model are significant predictors in explaining no intent to pursue a tenure track position.

The regression testing the relationships between the independent variables and the dependent variables career choice change scores for no intent to pursue a tenure track position revealed the negative significant predictor department support ($B = -.023$, $p < .05$). The model explains 2.6% of the variance and is significant with an adjusted R square .022, $F(1,249) = 6.548$, $p < .05$. Graduate students with less support from department faculty are more likely to have an increase in their intent of not pursuing tenure track faculty positions over the course of their graduate career.

Table 8
Regression Analyses Examining Independent and Control Variables Relationships to No Intent to Pursue Positions and Career Choice Change Scores for No Intent to Pursue Positions.

Variables	Beta	Standard Error	p
<i>8.1 Significant Predictor Variables:</i>			
<i>F (1,242) =3.881, p=.05; R square=.087; Adjusted R square=.076</i>			
Family Support	-.015	.006	.018
Role Model	-.280	.142	.05
<i>Significant Control Predictor</i>			
Field: Liberal Arts/Social Science	-.579	.142	.000
<i>8.2 Career Choice Change</i>			
<i>F (1,249) =6.548, p<.02; R square=.026; Adjusted R square=.022</i>			
Department Support	-.023	.009	.011

In summary, regression analyses support the hypotheses that the predictor variables career salience (1.1), relationship status (2.1), family support (2.10), advisor support (3.5), and faculty role models (3.7) are significant predictors in the report of likelihood of pursuing tenure track faculty positions. However, the variables number and age of children (2.2 and 2.3), graduate student peer support (3.1) or department support (3.3) were not significant predictors in the report of likelihood of pursuing tenure track faculty positions as hypothesized. Career salience (1.1), and department support (3.3) are significant predictors of changed interest in pursuing faculty careers during the course of one's doctoral program.

Mediating Variables

3) *How much do each of the mediating variables (work to family and family to work conflict) account for the variance of each dependent variable (intended career paths)*

To determine the linkages of mediating variables in the conceptual model, three separate analyses were run, with the mediating variables regressed on the predictor variables, the dependent variables regressed on the predictor variables, and finally the dependent variables regressed on both the predictor and mediating variables. The effects of the predictor variables in this third regression equation had to be less than they were when entered without the mediating variables (Baron & Kenny, 1986). When regressions were run to test the mediating variables of work to family and family to work conflict and their relationship with intent to pursue tenure track positions for each type of institution (research question 3), none of the models was significant. Thus, the mediating variables did not account for any of the variance of the dependent variables types of institution in this study. Work-family conflict, neither in the form of work to family conflict nor family to work conflict, were found to be related in the link between individual, family, and department variables, with graduate students' intent to pursue tenure track positions. Neither hypothesis 4.1 nor 4.4, stating that work to family conflict and family to work conflict are significant predictors in the likelihood of pursuing tenure track faculty positions are supported in these models.

Summary of Results

The important findings of the research are highlighted in Table 9. While the majority of the findings presented are significant results of the regression analyses,

equally important were results that some of the variables, such as those related to children and work and family conflict, were not significant.

Table 9
Summary of Results

Research Question	Findings
1 – Does career salience predict career intentions?	<p>Preference to work is a positive significant predictor for research I faculty career intentions, and increased interest for research I positions during the course of one's program.</p> <p>Work/role equality is a positive significant predictor for increased interest for liberal arts positions during the course of one's program.</p> <p>Women who preferred high work/role equality are significantly more likely to have research I career intentions than women with low preference for work/role equality.</p> <p>Women with high work/role equality preference are significantly less likely to report no intent to pursue faculty positions than women with low work/role equality preference.</p>
2 – Does relationship status predict career intentions?	Marriage is a negative significant predictor for research I and liberal arts faculty career intentions.
3 – Does the number of children one has predict career intentions?	No significant findings.
4 – Does the age of children predict career intentions?	No significant findings.
5 – Does the amount of family support predict career intentions?	<p>Family support is a positive significant predictor for liberal arts faculty career intentions and a negative significant predictor for no intent to pursue faculty positions.</p> <p>Women with low family support are significantly more likely to report no intent to pursue faculty positions than women with high family support.</p>

6 – Does the amount of department faculty support predict career intentions?	Department faculty support is a negative significant predictor for a change of no intent to pursue faculty positions during one's doctoral program.
7 – Does the amount of department peer support predict career intentions?	No significant findings
8 – Does the amount of department advisor support predict career intentions?	Advisor support is a positive significant predictor for liberal arts faculty career intentions.
9 – Does whether or not a woman has a faculty role model in the department who successfully balances work and family predict career intentions?	Whether or not one has a department role model is a negative significant predictor for no intent to pursue faculty positions.
10 – How much does the mediating variable work to family conflict account for the variance of career choice intentions?	No significant findings.
11- How much does the mediating variable family to work conflict account for the variance of career choice intentions?	No significant findings.
12 – What factors most account for intended career choice change to pursue tenure track positions?	Preference for work are significant predictors for pursuing research I positions. Work/role equality is significant for pursuing liberal arts positions. Less department faculty support is significant in the decision to not pursue a tenure track faculty position.

Chapter 5

Discussion

The current study utilizes a sample of female university doctoral students and examines individual, family, and academic department variables, the mediating variables of work-family conflict, and their relationships to intentions for career choices upon completion of the degree, specifically whether or not to pursue tenure track faculty positions. The individual variable career salience, family variables relationship status, number of children, age of children, and family support, and the department variables faculty support, peer support, advisor support, and presence/absence of a faculty role model are included as predictor variables in the model. Also tested are the mediating variables work to family conflict (how work experiences impact family life) and family to work conflict (how family experiences impact work life). It was hypothesized that these variables would be significant mediators in the link between the independent and dependent variables. The dependent variables measured respondents' interest in pursuing tenure track positions at research I universities, liberal arts universities, community colleges, or no interest in pursuing tenure track positions. Finally, this study also examines students' change of interest in tenure track positions at each type of university from the time they entered their doctoral program to their current intended career pursuits and whether or not there are predictor or mediator variable relationships to career choice changes.

While feminism has evolved into multiple strands of theory and political ideology, a common perspective that unites feminism is the importance of recognizing diverse identities (Allen, 2004). Thus, although this research is intended to find patterns

and relationships among a group of people with a similar shared experience (female doctoral students), it is simultaneously important to highlight the multiple identities and roles among the women of this sample. To achieve this recognition, characteristics of the sample are discussed here. The present sample is compared and contrasted to a national group of doctoral or graduate students to gain perspective of how well this sample represents the larger population of doctoral women and thus informs the extent to which the findings of this group can be generalized. Examining the characteristics and experiences of this sample also 1) informs whether or not these women comply with role theory's gendered expectations for work and family, and 2) highlights personal and professional role identities (as explained in role theory) that this group has chosen (Fredriksen-Goldesen, & Scharlack, 2001).

Characteristics of the Sample and Application to Larger Population

Where possible, the characteristics of this sample are compared to those in the national doctoral or graduate student population. However, in many instances, data were not found for this student group, thus national population statistics are utilized for reference comparisons.

Demographic, Individual, and Control Variables

The representation of most of the racial/ethnic groups in this sample are comparable to the national statistics of United States citizens who earned doctorate degrees in 2004 (Hoffer, Welch, Williams, Hess, Webber, Lisek, Loew, Guzman-Barron, 2005). Whites in this sample (81.7%) are comparable to the 80% of Whites who earned doctorate degrees in 2004. The 8.8% Blacks/African-Americans is slightly higher than the 7.2% who earned degrees in 2004. Asian Americans, Latinas, and other races are

slightly underrepresented in the study with differences of 2.2%, .8%, and 2.2% respectively, compared to the percentage who nationally earned degrees in 2004. The mean age of 34 years is comparable to the 33.3 median age of those who earned doctorate degrees in 2004 and in both cases, 25-34 year olds represent over half of all doctoral students (Hoffer et al., 2005). Full-time students are disproportionately represented in the sample, at 75.5%, with only 44% of graduate students nationally having full-time student status (Martinez & Day, 1999).

It is difficult to estimate whether or not percentages in each of the colleges and collapsed field categories are representative of the larger national population for two primary reasons. First, the language labeling departments and colleges varies, thus it is difficult to estimate whether college/field categories at the sample school include disciplines that match the broad labels used to categorize fields in the national sample. Second, the survey of earned doctorates does not report percentages of doctoral degrees awarded to females in all of the colleges/fields. There is disproportionate representation between the sexes in most fields, thus knowing the percentages of doctorates awarded in a field nationally does not afford a comparison to the percentage of women from a particular field in the sample (Hoffer et al., 2005). For example, 35% of sample respondents reported they were in the field of education. Nationally, 21% of doctoral degrees were awarded to those in the education field. However, 66% of all doctoral degrees in education were awarded to women (Hoffer et al., 2005). College/field representation in the sample cannot be compared to the national population.

The sample's work experiences differed from experiences reported nationally. The sample's paid work participation was higher (86.8%) than the national population of

graduate students (70.3%) (US Department of Education, 1994). While a national statistic measuring all doctoral students' experiences with their moms working outside of the home has not been collected, women's historical participation in the workforce helps to make comparisons. Among sample participants, 62% reported their moms worked full-time and 25% reported their moms worked part-time at some point while they were growing up, for a total of 87%. Historically, women's paid work participation has increased each decade, with 38% in 1960, 52% in 1980 (US Census Bureau, 1998), and over 60% working in 2000 (US Census Bureau, 2005b). During the years that the sample was growing up, more than half of all women (participants' mothers) were in the paid workforce. There is still a discrepancy between reported national women's paid work participation (62%) (US Census Bureau, 2005b) and the percentage of doctoral women in the sample who reported their mothers worked for pay (87%). Part of the discrepancy between these numbers may be that the question in the survey asked if their mothers worked for pay at some point while growing up which is a large span of years. People enter and exit the workforce at varying times and the national percentage of women working is a one time snapshot of women currently working for pay. Thus, if the census statistic reported the percentage of women who had ever worked for pay, the number would likely be much higher and possibly comparable to the percentage reported by the sample.

Ninety-three percent of the sample was partnered (24.5%) or married (68.1%). Those who are married are overrepresented in the sample compared to approximately half of women who are married in the US population (US Census Bureau, 2005b). "Partnered" is not a category used by the US Census and therefore cannot be compared to

the larger national population. Only 1.5% of women identified as “single” with children in the sample. The percentage represented by the sample was less than in the general population of households where 12.2% are single women with children (US Census, 2000). The other relationship categories were also underrepresented in the sample as compared to the national percentages including divorced (4.8%, 11%), separated (1.1%, 2.6%) and widowed (0%, 9%) (US Census, 2005b). Among those who are partnered or married, almost 90% reported their partners work full-time for pay outside of the home. Only 5% reported their partners do not work for pay. Whether partners are male or female, this number is much higher than the approximately 60% of women and 73% of men currently in the paid workforce (US Department of Labor and Statistics, 2005).

The mean number of people in the household (2.22) was comparable to the national mean (2.59) (US Census Bureau, 2000b). While 68% of all families nationally have children in the household, 11.2% of all families have a child under 6 years old (US Census Bureau, 2000b). In comparison, only 29.3% of the sample reported having children, but 15.4% of the total sample reported having a child under 6 years old. The differences in percentages of those with children can be explained by the majority of the sample being in a young age range (under 35 years) and thus they have had less time to have children than the general population. It is also logical that this sample has a higher percentage of children under the age of 6 than the general population since the majority of this group is in the age range most common for childbirth.

In summary, the current sample is similar to the national doctoral student population in terms of race and age representation. They are also similar in terms of the number participating in the paid workforce. There is a lack of published data reporting

demographic characteristics of the national population of doctoral students regarding relationship status, number and ages of children, and partner's work experience, thus it is difficult to make accurate comparisons between this sample and the national population of doctoral students or to know whether or not findings can be generalized to the population. Contrasts of this sample to the national population in the United States highlight the differences of choices and experiences between the two groups and offers perspective that the findings from this study should not be generalized to women in the national population.

Dependent Variables

The sample's responses to questions about intent to pursue tenure track faculty careers, and the changes of their career goals between the time they started their program and their current goals are informative. The sample's responses to these dependent variables are reported below, along with a comparison, where possible, to findings from a larger study of doctoral students' career intentions.

Interest in pursuing faculty careers at the completion of the PhD varied based on the type of institution. Only 27.5% agree or strongly agree that they are interested in pursuing a community college position, 37% agree or strongly agree they are interested in a research I position, while 55.3% agree or strongly agree they are interested in pursuing a liberal arts position. Golde and Dore (2001) explored doctoral students career interests and found a similar percentage, 54.3%, were interested in pursuing liberal arts faculty positions, while a higher percentage in their study expressed interest in research I positions (54.1%) than the current study, and far fewer students were interested in community college positions (3.9%). It is not known, however, the percentages

specifically for women in Golde and Dore's study who were interested in positions in each type of institution.

Intent to pursue positions changed slightly for each type of setting (career choice change scores) from the time the respondent started the program to current intent. This research found respondents reported significant increased intent to pursue community college positions, and significant decreased intent to pursue research I university positions. Mean change scores increased for liberal arts indicating a potential increase of interest in such institutions. There was also a small increase in change scores for those who reported no intent to pursue faculty positions, which is logically associated with the decrease of interest in research I positions. Golde and Dore (2001) found that over a third of doctoral students' interest in faculty careers declined from the time they started their program to the time they were surveyed, while only 16% of sample responses in this present study indicated decreased interest in tenure track faculty careers.

Discussion of Findings

The conceptual model for this research study organizes variables into four primary categories, including the predictors: individual variables, family variables, academic department variables, and mediating variables. The discussion of findings follows the same organizational format, beginning with career salience (individual variable); relationship status, number and ages of children, and family support (family variables); peer support, faculty support, advisor support and role models (department variables); and work to family and family to work conflict (mediating variables).

Individual Variables

Career Saliency

Career saliency is examined using three variables, including preference to work whether or not it is financially necessary, preference for equal role responsibilities with one's partner regarding work and family responsibilities, and the work/role equality variable created from the first two variables. The variable preference to work was a significant positive predictor for both intent to pursue research I positions and career choice change scores for research I universities. The work/role equality variable was significant for intent to pursue liberal arts faculty positions. There were no other significant relationships in the regression models.

It is unclear why significant results would be found for research I and liberal arts universities, but not for the other dependent variables, intent to pursue community college positions or no intent to pursue tenure track positions. However, based on interviews with faculty in various types of institutions, the kind of work required at research I and liberal arts universities is different from community college responsibilities (S.A. Koblinsky, 2006; S.L. Hutson-Comeaux, 2006; C. Twombly, 2006) and thus those with higher career saliency may also desire positions that require different challenges. Hakim (2002) noted that women who enter higher education tend to be "work centered women." This notion would support the idea that these women would have more interest in positions that require multiple types of production, including both research and teaching, as opposed to community colleges which focus on teaching.

The second career saliency variable mentioned above, preference for equal roles in terms of work and family responsibilities was found to be not significant in any of the

regression models, aside from the inclusion as an interaction variable. However, the responses to this variable were still interesting. This variable originally included 3 response options, 1) wanting equal family and work roles; 2) shared roles, but one has more responsibility for the home and the other more responsibility for paid employment; and 3) segregated roles. One respondent chose segregated roles, thus she was included in the group who chose shared roles. Those who did not choose equal roles still indicated they did not want segregated divisions. If the responses of the sample regarding division of work and family roles were placed on a continuum, this sample would be heavily weighted to the end that desires equal roles. This perspective fits with other studies examining “work centered women” which found that these women are less likely to desire traditional family roles and responsibilities than other women (McRae, 2003).

An interesting finding in the demographic statistics was the number of participants who had mothers who worked outside of the home. This variable was not included in the conceptual model or regression analysis, but it is possible that having a mother who preferred to, and was committed to work was a role model and may have influenced the reported commitment of the respondents’ to their own work.

Family Variables

Relationship Status

Marriage was found to be the only significant predictor in the regression analyses examining relationship status, with those married less likely to intend to pursue research I and liberal arts tenure track positions. One possible explanation for marriage as a predictor of career intentions could be that women who are married follow a more traditional model and prioritize family decisions above career goals. For example, Drago

& Colbeck (2003) identified “productive bias avoidance” wherein some female faculty members reported they put off marriage and having children to attain their desired career goals. Female graduate students who are married have not engaged in productive bias avoidance. It is interesting too that marriage was found to be negatively, significantly related to the faculty positions that seem to require the heaviest workload. A study examining the professional experiences of women after they earned professional and graduate degrees found that women who were not employed or who were employed but not as involved in their careers were more likely to have married prior to finishing their degrees in higher education (Statham, Vaughan, and Houseknecht, 1987). Perhaps the negative relationship indicates that these women are not as interested in careers that require significant involvement and the heaviest work commitment.

Amount of household responsibilities were not included in this study. Married women are repeatedly found to bear the burden of these tasks (Coltrane, 1996). Such responsibilities have specifically been found among female, married, graduate students (Konrad, 2003; Patterson & Sells, 1973). Konrad (2003) found that female business graduate students planned how they would balance work and family; with women shouldering greater household responsibilities, they were more interested in careers that required less time and more flexible hours. One of the great advantages of academia is that although there is an abundance of work, the days and times the work can be accomplished are more flexible compared to most jobs. Thus married women, who are more likely to have high household responsibilities, pursue the flexibility of academia but are less interested in the more demanding jobs. It is possible that marriage is not necessarily responsible for the negative relationship with intent to pursue tenure track

positions, but rather the responsibilities that often accompany marriage for women are the deterrent for pursuing such positions.

Another factor that was not examined in this research but could be influencing women's experiences specifically related to marriage is satisfaction. Respondents were only asked about their relationship categorization and not how satisfied or happy they are with their relationships. Doctoral students who report stress from partnered relationships while in graduate school report overall more emotional strain than other doctoral students (Maher, Ford, & Thompson, 2004). Having happy marriages has been correlated with positive family to work spillover. Thus, women who have happy marriages may be more satisfied at work, and thus more interested in continuing in their careers. Because satisfaction, happiness, and stress were not measured as related to married and partnered relationships, it is unknown if these factors could have been related to the negative significant relationships between marriage and intent to pursue research I and liberal arts university positions.

Number and Ages of Children

This study found that neither the number of children nor having a child under the age of six were predictors of career intentions, nor did they predict career choice change scores among this sample. Additionally, there were no significant differences between women with and without children, there were no significant differences between women with children under six years old and all other women, nor were there differences between women and their preferred job setting. For example, it was hypothesized that women with children who intended to pursue tenure track positions would be more likely to choose to pursue a liberal arts or community college position as compared to a

research I position due to the strenuous work commitment required at research I universities. However, there were no significant differences between these groups.

These findings, about children and their relationship to career choice are surprising as they contradict much of the work and family research indicating that the presence of children, number of children and the ages of children influence stress, role strain, and reported work and family conflict (Barling, Kelloway, & Frone, 2005; Moen, November, 2005; Perry-Jenkins, Repetti, & Crouter, 2000). Studies have found that having at least one child in preschool and having several children decreased the likelihood of women working for pay, even among those who had always intended to participate in paid careers (Hakim, 2002). One study of graduate students found that women were choosing not to pursue academic faculty jobs because they perceived barriers related to parenthood in the higher education system (van Anders, 2004). Those with children have a large amount of time that must be dedicated to childrearing (Coltrane, 1996; Williams, 1999) and they spend more time on household responsibilities than those without children. Women with children have increased stress and the highest levels of role overload and family to work conflict (Duxbury & Higgins, 2001) compared to men and those without children, thus, sometimes leaving limited time for paid work.

One explanation why child variables were not related to career intent is that these doctoral students are benefiting from the effects of the expansive hypothesis in combining multiple roles (Barnett & Hyde, 2001; Marks, 1977). Doctoral students may be experiencing the benefits from working, as has been found in other studies, including better mental and physical health (Barnett & Hyde, 2001), better well-being (Thoits, 1986), greater feelings of self-esteem and power, and more social connections (Barnett,

1999). It was hypothesized that the women with children in this sample would have the highest levels of overload and conflict and thus even expansive hypothesis benefits would be overwhelmed by the “ceiling effect.” The results of the research do not support this hypothesis.

A second explanation as to why a relationship was not found between child variables and career intent is that the overwhelming majority of this sample reported high commitment to careers in the individual variable career salience, thus it is possible that this commitment overwhelmed family structure variables. One study of doctoral students found that women with children had significantly greater career commitment than women without children (Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000).

Another consideration is that there were no questions addressing the Drago and Colbeck’s (2003) theories of productive bias avoidance. These researchers and others (Mason & Goulden, 2002; Moen, November, 2005) found that faculty are making intentional decisions to delay childbearing to increase their likelihood of career success and specifically to increase their likelihood of achieving tenure. It is possible that the graduate students surveyed have and are making deliberate decisions of timing related to partnering and childbirth/childrearing so their faculty career intentions are not impacted by these family variables.

Family Social Support

Family support was a positive, significant predictor of intent to pursue liberal arts faculty positions. Family support was also a significant, but negative predictor in the model examining no intent to pursue tenure track faculty positions. Women who reported lower family support were more likely to report no intent to pursue academic positions.

Family support was not a significant predictor in any of the other regression analyses exploring intent to pursue positions at other institutions of higher education, nor was it a significant predictor of career choice change scores. There were no significant differences found between women with high and low family support and their intentions to pursue faculty positions.

To adhere to feminist theory which embraces multiple meanings and definitions of families, research participants were not provided with a definition of “family” before completing the family support measure. Students likely had differing perspectives on who qualified as “family” for their responses. For example, in their responses, students may have reflected about husband, parent, extended family, or same sex partner support. While the decision to include multiple definitions of family was intentional, in retrospect, the lack of definition makes it challenging to interpret the results of the family support variable. The measure and study would have been improved if students had been asked to report whom they included in their “family” (such as family of origin, self-selected marital partner, extended family with whom they reside).

A research paper titled “The Family of Origin Influences on Career and Development: An Analysis” presented a literature review of studies from 1980 through 2003 that examined families of origin’s influence on career choices across the lifespan and focused on both family structure variables (such as parents’ occupations) and family dynamic influences (such as family support). The researchers reported that there was a dearth of research examining families of origin relationship to career intentions for populations older than adolescence and undergraduate populations (Whiston & Keller, 2004). However, they reported in the limited research available, there is little evidence

that families of origin have a direct effect on career choices for young adults (Whiston & Keller, 2004). This lack of evidence that families influence career decisions is consistent with the study results indicating no significant relationships between family support and career intentions for research I positions or community college positions.

Partner support on the other hand has been related to career variables, and specifically career choices, which supports the study finding that family support is a significant predictor of intent to pursue liberal arts faculty positions and also influences those not pursuing such positions. Husbands' support and women's perception of their husbands' preference for their career have been found to be directly related to influencing women's career goals and decisions (Parasuraman & Greenhaus, 1993; Werbel, 1998).

Research examining women's experiences in academia have found connections between family and careers. Consistent with the findings of this study which found increased family support relates to increased intent to pursue an academic position at liberal arts universities, among doctoral students, partner support has been found positively related to career commitment (Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000). Women who are currently faculty in academia who perceive high family needs report a greater likelihood of choosing to leave academia (Locke, 1995). Such research supports the finding that women with lower family support were more likely to report they would not be pursuing academic faculty positions. Family support has also been found to influence career choices of females in academic medicine (Heins, 1982). Overall, the literature demonstrates that family support from partners is influential in career choices, however literature is limited about the role family of origin support plays in career decisions.

Department Variables

Department Peer Social Support

Department peer support was not a significant predictor of any career intention decisions or career choice change scores. There were also no identified significant differences between women with high and low peer support.

There is literature to support the relationships between both peer support and academic experience and peer support and commitment to careers. Doctoral peer support groups have been linked to lower stress among graduate students (Bowman, Bowman, & DeLucia, 1990) and contradictory to the findings of the present study, peer support among graduate students has been found to be a positive predictor of graduate students' commitment to pursuing their academic careers (Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000). However, overall the literature examining the influences of doctoral students' relationships to work and family issues and to career intentions is sparse. Peer relationships may not have been a predictor of career choices because although doctoral students' experiences with each other may influence students' satisfaction with their program or buffer the amount of stress felt by offering immediate emotional support, assistance in course work, or providing a social outlet, this peer support does not necessarily prepare them for careers or offer examples of faculty life.

Department Faculty Social Support

Department faculty support was a significant, negative predictor of students' career choice change scores of no intent to pursue tenure track faculty positions. There were no other significant predictor relationships between department support and career

intentions or career choice change scores, nor were there significant differences between women with high or low department support.

One study with graduate students which examined department social support as a predictor of stress, burnout, and career satisfaction also did not find significant results. However, this study did find that graduate students who feel a sense of community in their department were more likely to feel satisfied with their career choice satisfaction (Kovach, 2003). Female graduate students who report their academic department has higher sensitivity to family issues also report greater commitment to their career (Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000). An explanation as to why department faculty support is not a significant predictor for most of the analyses in the present study could be that many students may not need to feel universal support in a department, but rather having at least one advisor who is supportive may be sufficient to affect interest in academic careers for some students.

Advisor Support and Role Models

Advisor support was a significant predictor of intent to pursue liberal arts faculty positions. No other results were significant with intent to pursue other faculty positions nor for any career choice change scores. There were also no significant differences found between women with high and low advisor support.

The role model variable was a significant, negative predictor of “no intent” to pursue tenure track faculty positions. Women without a role model were more likely to report that they did not intend to pursue a tenure track faculty position. One challenge for some women in academia is finding a mentor. Women, as compared to men, have greater difficulty finding a mentor, and those women who do have mentors report spending less

time with their mentors than male students (Sanbunjak, 2006). There is evidence that faculty composition is related to career choice (Campos-Outcalt, Senf, Watkins, Bastacky, 1995). Women in non-traditional fields such as science and engineering report there are not enough models of tenure track women in their departments (Snover & Harris, 2003). Mentoring is important as students in academia report that mentors have had important influence on career choices and career guidance (Sanbunjak, 2006). Students in academia report that having a faculty role model influenced their career decisions (Campos-Outcalt, Senf, Watkins, Bastacky, 1995). A study of female graduate students found that having a mentor was a predictor of increased career commitment (Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000). Graduate students who report having a positive mentoring relationship are less likely to leave their graduate programs (Jacks, Chubin, Porter, & Connolly, 1983), thus, one may draw the conclusion that the same students would also be less likely to leave academia following the achievement of their doctoral degrees. Given the evidence supporting the importance of the presence of faculty role models, it is logical to conclude that not having a role model would predict a great likelihood to not pursue academic positions, as was found with this sample.

While advisor support has been identified as a predictor of whether or not students experienced burnout in their graduate program, it was not a predictor of whether or not graduate students were satisfied with their chosen careers in academia (Kovach, 2003). And while graduate students relationships with their advisors are important to their success as students (Zhao, Golde, & McCormick, 2005), this relationship does not necessarily influence career choices. Evidence exists in the literature to support both the significant and non-significant findings for advisor support and role model variables.

Mediating Variables of Work to Family Conflict and Family to Work Conflict

In this research model, neither work to family nor family to work conflict were found to be significant mediators in links between the predictor variables and the outcome variables. There were also no significant differences in comparisons between women with high and low work to family conflict or high and low family to work conflict.

The finding that work-family conflict variables were not significant was surprising. Female students in the highest levels of academia are likely to be high achievers with strenuous expectations for themselves. It seems logical that these women would feel the burden of work and family conflict because of internally driven expectations to excel in all roles. The career salience variables indicated this is a group who is highly committed to work. The fact that career salience variables were significant in several regressions indicates that these women are also more likely to pursue challenging careers. Thus, it seems these high achievers would be more likely to experience work-family conflict which would in turn affect career choices.

Conversely, one could also argue that women who are high achievers may report that work-family conflict is not an issue for them. The measure asked about how often family precludes them from engaging in work and vice versa. These women may be such high achievers that they find a way to succeed at all of their roles, thus work-family conflict would not be a predictor for career choices.

Cognitive dissonance could have been another factor influencing the results of the present study. To succeed as a graduate student requires a tremendous amount of time, energy, and long term commitment. It may be beneficial to the present sample to

intellectually minimize conflicts that exist. Some students may not allow challenges of work-family conflict to influence their perspective on their experience. They cannot afford to spend the time and energy required to second guess choices that have already been made.

The design of this research study could have been a factor that led to non-significant results. There is ample literature showing connections between, for example, family variables and work to family/ family to work conflict, and between work-family conflict and career choices. Examples have not been identified in the literature that present similar links in relationships, with work-family conflict identified as mediators.

Another factor of this research design that could have influenced the non-significant results was the measure of work and family conflict and its execution. This measure was specifically chosen after a thorough review of work and family measures because it was perceived to provide the best assessment of both work to family and family to work conflict. Response anchors were modified as recommended by prominent work and family researchers (Barling, Kelloway, & Frone, 2005). The survey and responses measured and scaled, as precisely as possible, the number of occurrences of work-family conflict. However, the perceived amount of conflict and stress experienced by respondents was not measured. Most of the work and family research has found significant results when perception of stress and conflict is measured rather than how often events occurred.

Limitations

One of the primary limitations of this study is the sample. While the University of Maryland, College Park offers a diverse pool of participants, the university is a research I

school in an urban environment. Thus, students who select a graduate program in this type of school and experience their program in this type of academic environment may have perspectives that vary from students in other types of institutions in other geographic locations. It is also possible that the sample in this geographic location, an east coast city, is making different choices regarding work and family. Discrepancies are found in many patterns of behavior and attitudes between populations who live on the coasts of the United States as compared to those who live in the Midwest. For example, it is possible that a large, state university in the Midwest may have women who marry and have children earlier, and thus different findings may result at that school if this study was replicated.

Other possible biases in the sample are the representation among the different colleges and the length of time respondents are in their programs. The school of education has a large number of respondents, while other colleges had one or two surveys returned. The school of education is more likely to have a large population of female faculty as compared to other fields such as the physical sciences which is more often male dominated. Female students in departments with more female faculty may have been more likely to find advisor support, faculty support, or role models to whom they related. The length of time respondents are in their program may affect their responses to the surveys. Students who started their program in 2005 have been in their academic program for less than a year. Some of these students are likely receiving fellowships and thus are not required to be in the department regularly to observe the work and experiences of faculty members and to form relationships with faculty members. Thus, although the correlations that included the variable comparing those who had been in

their program less than a year to all others did not show significant results, it is possible that students who have been in their programs for a year or less may not have had a chance to make informed decisions about faculty responsibilities and their own career intentions, which in turn may affect the findings of the study.

Another limitation is the sample response rate for the available population. While a 30% response rate is acceptable, it is impossible to determine whether those who responded truly represent the population or if some bias was introduced by those who chose not to respond to the participation request.

The survey design is also a possible limitation, which could have been improved in several ways. The survey would have been strengthened if some of the variables were defined prior to asking participants to respond to statements, or if respondents had been asked to identify how they defined variables. For example, participants were asked to answer questions about family support. Family was not defined for respondents. This was a decision made by the researcher to align with feminist assumption that there are multiple definitions for “family” (Ingoldesby, et al., 2004) and that providing parameters may hinder this acceptance of multiple family forms. However, some responses may have referenced family of origin experiences, while others may have referenced family experiences with a current family of choice. Asking respondents who they included in their definition of family would have better informed the family support variable. A second survey limitation was that most of the response anchors for the survey required forced answers, thus limiting the breadth and depth of information that was collected from participants. Finally, the survey was long and thus participants’ willingness to complete the survey or their energy and attention may have affected survey responses.

The survey design is also a potential limitation in that the validity of some of the measures is questionable. Where possible, measures were selected that had been utilized in previous studies and had been shown reliable and effective. However, many of the measures were changed or adapted. Several questions addressing family support for work and family issues were added to the original family support measure. Changes were made to the language of the department faculty support measure because the original questions were designed for “employees” in corporations. The peer support measure was developed by the researcher, and the work and family conflict measure response anchors were adapted as suggested by prominent researchers in the work and family research field. For future research with these measures, it will be beneficial if the validity of these instruments is tested prior to implementation.

A fourth potential limitation is the data collection process. Data were collected by sending emails to the population and inviting them to complete the online survey. From the initial mailing, a challenge existed, as some of the email messages were returned with a message saying they were undeliverable, thus biasing the potential sample. While graduate students are a group who are especially likely to be familiar with email and internet use, collecting data via the internet has not yet become commonplace. Students may have been hesitant to complete a survey on-line that requests personal information due to concerns about confidentiality. Also, as email and the internet have grown in popularity, the amount of “junk” mail that is received via inboxes continues to grow, thus, upon receiving the request to complete the survey, participants may have questioned whether or not the request was legitimate and if negative consequences would result from

their participation. Therefore, some students may have ignored or deleted the request to complete the survey.

Additionally, there were some areas that went unexplored that may have addressed some of the topics that prominent work and family researchers are examining. For example, Drago and Colbeck (2003) and Moen (November, 2005) have found that professionals are delaying partnering and childbearing for the sake of career advancement. There were no questions on the survey that addressed these issues, thus it is not known if school and work responsibilities may be influencing family decisions for this sample. A final problem with the survey design was that the survey measured respondents' number of occurrences of work conflicting with family and vice versa, but there was no measure in the survey that assessed the amount of perceived internal stress or conflict. Such stress and conflict questions may have better informed if students perception was that they benefited from their multiple roles (expansive hypothesis) or that they perceived they suffered because of their multiple roles (scarcity hypothesis) (Marks, 1977).

Feminist Theory and Role Theory

Feminism, specifically liberal feminist theory, is the underpinning of this study and the theoretical perspective that encouraged the questions that were examined. This study is from a liberal feminist perspective because the design of the study, and the questions asked adhere to the societal norms and structural constraints that persist in academia, such as the tenure system and faculty expectations. The established rules were not questioned or challenged. A contrast to this strand of feminism would be radical feminism, which may ask questions about how things could be different if there were

changes in the institution, rather than changes of choice by individuals in response to the institutionalized standards. By design, this research adhered to one of the founding principles of feminist theory that the experiences and perspectives of women are brought to the forefront. However, the findings of female doctoral students' experiences are not compared to male doctoral students' experiences, which is a divergence from liberal feminist methods. Because men were not included in the sample, gender is seemingly not a crucial variable in the study, as women and men are not compared and contrasted. However, in a culture where sex often guides socialization, gender is an important variable that influences the experiences of women. Another component of this study which adheres to feminist principles is that women were included who had diverse family structures, including women who are married, partnered, separated and divorced, both with and without children, and single women who have children. The research study and findings diverge from liberal feminist principles in that the survey offered diverse response options that did not require respondents to embrace dichotomizing public and private spheres. The majority of the sample responded by reporting preferences for a blending of these environments, such as choosing to have equal roles with partners in terms of work and family, and reporting a preference to work even when it was not financially necessary. These choices reflect that these women embrace having choices, which is a major part of the foundation of feminism.

While feminism is the lens and foundation for the research, role theory helps to create the conceptual model, to structure the questions, and to design the survey. One could interpret the findings to indicate that overall, participants reject the limiting, gendered expectations of role theory's expressive and instrumental roles. For example,

the lack of significant relationships between the presence, number, and ages of children to career choices indicates that women are making career decisions which match their personal desires, rather than adhering to traditional cultural perspectives that require women to nurture while men are expected to be financial providers. Additionally, one may conclude the findings of this study contradict the scarcity hypothesis of role theory that multiple roles result in role strain. The women in this sample seem to embrace and succeed at multiple roles and do not allow one role to hinder the other, as is exemplified in the fact that work-family conflict was not a significant mediating variable predicting women's career choices.

Another possibility for this sample, however, is that these women are not at a time in their lives when they have the overwhelming stress due to multiple roles. Although graduate school presents burdensome demands for some students in terms of time and energy, there is also tremendous flexibility for many graduate students in terms of when they do their work, and the amount of time they have to finish their degrees. Thus, many of these students may be at a life course point where the multiple roles do not result in conflict and where the stress is not overwhelming to the point that they are letting go of career aspirations. These students may also be able to set boundaries in the amount of responsibilities they take on so that they can effectively embrace multiple roles by managing stress and conflict, and thus enjoy the benefits as theorized in the expansive hypothesis.

Programmatic and Policy Implications

There were important findings from this study which may help to inform students' personal decisions as well as both faculty and universities' programs and policies. Much

of the news in the media highlights the barriers that women face in academia. In September, 2006, the National Academy of Sciences released a major report about women in science in academia (National Academy of Sciences, 2006). While the report begins with the good news that “women have the ability and drive to succeed in science and engineering,” it goes on to highlight the multitude of barriers women face in academia in the science fields, such as discrimination and biases from both men and women and in universities’ policies, procedures, organization, rules, and evaluation criteria for faculty. One of the primary news sources for academics, *The Chronicle of Higher Education*, is filled with stories of the discrimination and challenges women face as academics, especially related to work and family issues. Data and literature support the claims that female faculty in academia endure bias and discrimination. Women repeatedly report that they find it difficult to mix academic careers (particularly tenure requirements) and family life.

This study provides inspiration for students. Even with obstacles, doctoral women are persevering. While it is unclear if women are “leaking” from the pipeline between graduation and time of the first academic job at a rate that is higher than men, there is still an abundance of women who are choosing academia. Family variables which have been found influential for some faculty, such as having children (Mason & Goulden, 2002) are not affecting female doctoral students’ decisions to enter academia. Thus, females who are successful with managing multiple roles related to work and family are entering the profession. For years to come, they will serve as the role models, mentors, and advisors for future faculty.

This study also informs current and future doctoral students of some of the variables that may be important if they intend to pursue academic jobs. Finding a supportive advisor and nurturing family support may enhance their motivation and success for their future careers. For faculty, this study indicates that the modeling they provide, the relationships they establish with their advisees, and the environment they promote regarding work and family expectations within their department affects career paths for some students. This finding may be exciting news for some faculty. The work faculty do with students may literally influence generations of doctoral students, and thus future female faculty in academia. For faculty who have not embraced the full responsibilities of advising students, these findings may suggest they need to make changes in behaviors and time allocation to best serve the needs of their students. Individual faculty may need to examine the environment their expectations and attitudes are promoting in the department. Are they contributing to a supportive atmosphere that is sensitive to the diverse personal and professional needs and circumstances of their students? Do faculty demonstrate behaviors that model a healthy balance of work and family that is desirable for themselves? Obviously this self reflection, and changes that achieve a more balanced life for faculty would not only positively influence the role models available to graduate students, but would also likely enhance the well-being of the faculty, which thus may contribute to a more supportive department.

Academic department chairs can ease the burden on individual faculty by promoting and rewarding faculty within the department who are supportive of doctoral students. It is common for certain professors to be “popular” among students, meaning there is a short list of faculty who students most often turn to for advising, supervising,

serving on committees, and for multiple forms of support. Departments could reward faculty who take on these extra roles of supporting and mentoring students by removing other responsibilities and assigning them to faculty who are not as involved in supporting graduate students. Another option is for departments to set expectations for time and behaviors required for each faculty member to spend with their advisees so that there is not undue burden on a few, select faculty within a department, but rather the responsibilities are dispersed.

For internal department reviews, anonymous evaluations from graduate students could be included that assess students' perceptions of overall department atmosphere and students' perceptions of their advisors' support. This information would help to inform department chairs where the department is successful and where changes could be made that would enhance the experiences of students in the department.

For universities, this study provides evidence that female doctoral students are interested in academic faculty positions. While this study did not determine whether or not there is a 'leak in the pipeline,' it established that women intend to be candidates for hiring. Particularly liberal arts universities should have a plethora of women from which to choose to fill faculty vacancies. Search committees at research I and liberal arts universities can expect female candidates who have high career salience and who are pursuing such positions because they are committed to their work.

This research found a relationship between low department support, lacking role models, and no intent to pursue faculty positions. For universities who are truly committed to eliminating barriers and reducing bias based on gender, implementing hiring practices that encourage the hiring of women, particularly in departments where

examples of successful tenure track female faculty are rare, is extremely important so that role models are available. Creating policies that encourage departments to respect the multiple personal and professional roles and responsibilities of faculty, students, and staff will likely lead to a supportive department environment.

Directions for Future Research

This study examined the relationships between individual, family, and academic department variables, with mediating work and family variables, and their relationships to career intentions of current female doctoral students.

One of the motivators for this study was the suggestion that a “leak in the pipeline” contributes to the lack of female representation in higher education and that women are not entering the pool of candidates for tenure track positions (Mason & Goulden, 2002). While only 27.5% agreed or strongly agreed that they would pursue community college positions, approximately 56.7% of participants *disagreed* or *strongly disagreed* with the statement that they had no intention of pursuing a tenure track faculty position. More than half of all participants intend to seek faculty positions in liberal arts universities. This study did not examine men’s intended careers so a comparison cannot be made between the numbers of men and women that will enter the pool of candidates for academic positions. Future research could make such comparisons to see if there are significant differences between men’s and women’s intended career participation in academia. Additionally, and more importantly, if there is truly “a leak” for women, it seems that only *some* of these variables are contributing to women’s decisions regarding women’s career choices *some* of the time. Thus, future research could explore additional variables that may be contributing to females’ decisions about participating in faculty

employment in higher education. For example, this sample included limited individual variables. Career salience was the single individual predictor. Personal characteristics and traits may have significant relationships to career decisions, such as temperament, self-esteem, motivation, and intelligence.

Future research could examine the timing of work and family life course events to discover what is happening in women's lives when they are making crucial career decisions.

Another area of research would be to follow-up on this sample to explore if intentions matched behavior. Did the numbers of those who reported they would pursue research I faculty positions follow through with this goal?

Future research should expand the sample population to include greater diversity of participants including types of institutions, geography in terms of urban/rural universities, location in the country, and size of the university in order to be certain that participants represent the diversity of doctoral students' experiences.

Future research should include the complete sample of graduate students. Due to survey design and questions, single women without children were excluded from this study. It is hypothesized that if that population had been included in this study, there may have been different findings.

Collecting qualitative data would be beneficial for future research. These findings contradict most other research in the work and family literature by finding that neither children variables nor work and family conflict variables were significant in the model. Asking participants about the timing of their decisions regarding family variables, and asking them to explain their experiences (or lack thereof) with work and family conflict,

would provide greater understanding of why this group differed from most others in the work and family literature. Qualitative questions could also help to explore role theory and feminist theory by asking respondents how their gender and roles influence their identity.

Making some changes to the measure would be beneficial in future research, such as the examples mentioned in the limitations and the future research discussed above. Providing more clear definitions of family, revising the response anchors in the work and family conflict scales, and inviting open responses for qualitative data would all enhance future work and family research.

Conclusions

The primary goal of this study was to examine individual, family, and department variables, and the relationships they may have to female doctoral students' intentions to pursue tenure track positions. This study examined work to family and family to work conflict as mediating variables in the path between the predictor and dependent variables. Additionally, change of intentions to pursue faculty positions at the time of program entry to current career intentions at each type of university was examined.

This study revealed that career salience is a positive significant predictor of students' intent to pursue research I and liberal arts university tenure track positions. It is also a significant predictor for women's increased interest in pursuing research I faculty positions. Marriage is a negative significant predictor for intent to pursue research I and liberal arts positions, while variables related to age and number of children are not significant predictors. Family support is a significant predictor for intent to pursue liberal arts positions, and is a negative predictor for no intent to pursue faculty positions.

Department support is a negative predictor for career choice change scores for no intent to pursue faculty positions. Advisor support is a positive predictor of intent to pursue liberal arts faculty positions and the variable role model is a negative predictor of no intent to pursue faculty positions. The mediating variables work to family and family to work conflict are not significant in any of the analyses.

This study provides inspiration for female doctoral students that they have female student peers who are succeeding and continuing to work in academia, regardless of their work and family experiences. Individual students are cautioned that partnering choices and family support may influence their experiences and thus career choices. Faculty are informed that the work they do within their departments as advisors and role models is influential for some students in their chosen career paths. Universities are informed that women are entering the pool of faculty candidates, particularly at research I and liberal arts universities. Women are candidates who are committed to their work. To have the most abundant selection of future faculty, it is important to institutionalize expectations and policies that 1) require hiring, promotion, and evaluation processes that do not discriminate against women; 2) encourage departments to be supportive environments for students; 3) prioritize faculty-student advising relationships and reward faculty who excel in these roles. The implementation of these attitudes, behaviors, and policies at the various levels is likely to lead to universities that support all women in academia, and thus enhance institutions of higher education.

Appendix A: IRB Narrative

Title:

Female Doctoral Students' Family and Academic Department Experiences and Their Relationships to Career Choices.

Abstract:

The purpose of this study is to determine factors that may influence women's choices of whether or not to enter the pool of tenure track faculty; and for those who pursue these positions, factors that influence their choices of the type of institution; research I universities, liberal arts universities, or community colleges. Feminist theory and an ecological framework will be utilized to guide the conceptual model and the research questions. Respondents will be administered measures examining family, and academic department experiences related to work and family. It is hypothesized that variables including family structure, social support at the familial and department levels, the presence of a faculty role model successfully balancing work and family, and perceived work to family and family to work conflict will influence intended career tracks of female doctoral students. Implications for program and policy development will be discussed.

Subject Selection:

The sample for this study will include female doctoral students who are cohabiting, married, divorced, widowed, or single with children at The University of Maryland College Park who have been in their current program for at least six months and who are currently United States citizens. This sample was chosen due to the diversity of students and disciplines at Maryland, as well as the high quantity of students available.

Additionally, only United States citizens will be selected because it is hypothesized that international students may differ categorically from students who are citizens in their definitions of variables such as family support and work and family conflict, as well as have differences in accessibility to family and other social support due to potential geography and language barriers. Additionally, literature and statistics for this study included research from The United States, therefore the systems of tenure and expectations for academics in other countries may differ, thus the career choices for international students may not align with the structure of universities in this culture. After selecting students who meet the specified variables, it is anticipated that approximately 1,200 students will be recruited for this study. The researcher desires to recruit a sample minimum of 33% from the total population.

The researcher also will send emails of the survey to male doctoral students at The University of Maryland College Park who have been in their current program for at least six months who are currently United States citizens. These survey responses will be used for future research and will not be included in the present study.

Procedures:

A list of email addresses of all members of this group will be obtained from The University of Maryland College Park registrar. An email letter that explains the study and the survey, with a link to the online survey, will be sent to the email addresses of all

eligible students. The letter will also explain confidentiality on the part of the researcher, the estimated amount of time required to complete the survey, contact information to answer any questions respondents may have, and information about a charity donation incentive (A monetary donation will be made to a charity as selected by the respondent to show appreciation for completing the survey). The survey is approximately 90 questions and it is anticipated that the survey will take approximately 15 minutes to complete. The researchers desire a minimum sample of 33% participation from the sample. If the response is below 33%, a follow-up e-mail will be sent two weeks after the initial e-mail. The follow-up will include a reminder about the study, thank those who already completed the survey, and request participation if they have not already done so. The follow-up email will be sent to everyone, as there is no way to track who has or has not completed the survey. If necessary, a third e-mail will be sent out two weeks following the second. A text copy of the internet survey is attached.

Risks and Benefits:

There are no known risks associated with participating in this research project.

Confidentiality:

The surveys are anonymous and will not contain information that may personally identify participants. The internet survey is maintained on a secure website and the collected data can only be accessed by using a password. The data will be accessed only by the principal investigator and the doctoral student conducting the research. Once the surveys are complete and submitted, the researcher has no connection between the email addresses and the survey, thus confidentiality will be maintained. All hard copies of documents will be stored in a locked file cabinet in the researcher's office.

Information and Consent Forms:

No deception will be used with participants. A brief explanation of the study will be included on the initial email sent to recruit students. A thorough explanation of the study, guided by the Maryland Internal Review Board Template will be used to achieve informed consent. Participants will be required to view this consent page and to click "Accept" before moving on to complete the survey.

Conflict of Interest:

There is no known conflict of interest associated with participating in this research project.

HIPAA Compliance:

No HIPAA protect health information is being used for this study.

Research Outside of the United States:

No research is being conducted outside of the United States.

Research Involving Prisoners:

Prisoners are not included in the recruited population for this study.

SUPPORTING DOCUMENTS

Included in the application is: The email that will be sent to invite students to participate, the consent form each student will need to accept before beginning the survey, and a text version of the internet survey.

Appendix B: E-mail to Recruit Participants

Dear College Park Doctoral Student:

Feeling overwhelmed with the never ending workload? Ever wonder to yourself, “*Why* did I decide academia was a good idea?” Having a difficult time remembering what it was like to have time for yourself? For your family?

I write to request your insight as a doctoral student and to participate in a study examining doctoral students’ experiences with family and school/work, the conflicts that may or may not result, and the relationship of these variables to career choices. You can improve the future resources for doctoral students by sharing your experience. I am a fellow doctoral student at College Park, writing to request the generosity of a few minutes of your time. We as doctoral students share similar experiences in the pursuit of our degree: challenging classes, stimulating research, and the grand achievement, completing the dissertation. We also share the task of attempting to have lives outside of school/work. Although our families, responsibilities, and personal pursuits are diverse, we all strive to establish a satisfying balance between school/work and our personal lives. I know your time is valuable, so in exchange for 15 minutes, I will make a personal contribution to a charity you select. Your participation entails completing an anonymous internet based survey located on a secure website. The first page of the survey provides a more detailed description of the study. You can easily access the survey by clicking on the survey website:

(address will be placed here when website is made active)

Thank you so much for sharing your time and experiences.

Sincerely,

Marta McClintock-Comeaux

University of Maryland, College Park Doctoral Student

Appendix C: Consent Form

(First page of internet survey, must click “accept” to advance to survey page)

This is a research project being conducted by Marta McClintock-Comeaux and Dr. Elaine Anderson at the University of Maryland, College Park. We invite you to participate in this research project because you are a University of Maryland doctoral student. The purpose of this research project is to understand some of your family and school/work experiences during your doctoral tenure in the past year, and how they may or may not influence your career choices.

The procedure involves approximately 15 minutes of your time and entails completing an internet based survey which is primarily multiple choice. Example questions include, “I am employed: A) on campus, B) off campus, C) Both, D) Neither.” Another example includes: “Members of my family come to me for emotional support: A) strongly agree, B) agree, C) disagree, D) strongly disagree

We will take all possible precautions to keep your personal information confidential. To help protect your confidentiality, the surveys are anonymous and will not contain information that may personally identify you. The survey is maintained on a secure website and the collected data can only be accessed by using a password. Once you submit the survey, the researcher has no connection between your email and your survey, thus confidentiality will be maintained. Results reported will be group results, no individual responses will be reported. All hard copies of documents will be stored in a locked file cabinet. There are no known risks associated with participating in this research project.

The benefits to you include improved resources available for doctoral students and academics. We hope that in the future, other people might benefit from this study through improved understanding of doctoral student experiences. Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

This research is being conducted by Dr. Elaine Anderson and Marta McClintock-Comeaux in the Family Studies Department at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Dr. Elaine Anderson at: 301.405.4010, 1204 Marie Mount Hall, College Park Maryland, eanders@umd.edu.

If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742;** (email) irb@deans.umd.edu; (telephone) 301-405-0678

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Your clicking on the “ACCEPT” button indicates that:

you are at least 18 years of age;

the research has been explained to you;

your questions have been fully answered; and

you freely and voluntarily choose to participate in this research project.

Appendix D: Internet Survey for Participants (Text Version)

Female Doctoral Students' Family and Academic Department Experiences and Their Relationships to Career Choices.

Please choose the one option that best describes you **Demographic Information**

1. What is your sex? Female Male
2. How would you describe your race or ethnicity? White/Caucasian, Black/African American, Latina/o, Asian American, Native American, Other
3. What year were you born?
4. What year did you start your current doctoral program? (drop down list of choices)
5. What is your expected year of graduation? (drop down list of choices)
6. What college is your program in? (A drop down list of general categorical options will be on the survey)
7. What is your Student Status? (Full time (registered for three or more classes or six dissertation credits in the fall and spring semesters), Part time (registered for two or fewer classes in the fall and spring semesters))
8. Employment Status: "In a typical week, beyond academic work for my degree, I work for pay" (30 hours or more a week; 11-29 hours a week; 1-10 hours a week; I do not work for pay)
9. I am employed: On campus; Off campus; Both; Neither
10. Identify your status as a student in progress toward your degree (Taking classes, studying for comprehensive exams, working on dissertation, other)

For 11-14, please choose the response that best describes you (SA=Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)
11. When I entered my doctoral program, I was interested in pursuing a tenure track faculty position at a Research I university upon completing my degree. (SA, A, D, SD)
12. When I entered my doctoral program, I was interested in pursuing a tenure track faculty position at a liberal arts college upon completing my degree. (SA, A, D, SD)

13. When I entered my doctoral program, I was interested in pursuing a tenure track faculty position at a community college upon completing my degree. (SA, A, D, SD)
14. When I entered my doctoral program, I was NOT interested in pursuing a tenure track faculty position at a university or college upon completing my degree. (SA, A, D, SD)

Family Structure

15. While you were growing up, did your mom ever work for pay outside of the home?
Yes, full time; yes, part time; no; not applicable
16. Which response best describes your current relationship status? married, partnered, divorced, separated, widowed, single
17. Which response best describes what your relationship status was when you began the doctoral program? married, partnered, divorced, separated, widowed, single
18. What is your partner's work status: works full-time; works part-time; does not work for pay; Not Applicable
19. People talk about the changing roles in the family. Here are three kinds of families. Which of them corresponds best with *your* ideas about the family?
 - A. A family where each of the two partners has an equally demanding job and where housework and the care of the children are shared equally between them
 - B. A family where the woman (one partner) has a less demanding job than the husband (second partner) and where she does the larger share of housework and caring for the children
 - C. A family where only the husband (one partner) has a job and the wife (second partner) runs the home
20. If *without* having to work, your family had what you would regard as a reasonable living income, would you still prefer to have a paid job, or wouldn't you bother?
Would still work; wouldn't bother working
21. Who is the *main* income-earner in your household?
I am; my spouse/partner; both jointly; someone else
22. How many children do you have? (If 0 children, skip to number 25)
23. What is the age of your youngest child in years?
24. What is the age of your oldest child in years?
25. Are you responsible for the care of an elder or disabled dependent more than three hours a week? (Yes; No)
26. Including yourself, how many family members live in your household?

Family Support

Please choose the response that best describes you

(Responses: SA= Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)

1. My family gives me the moral support I need (SA, A, D, SD)
2. I get good ideas about how to do things or make things from my family (SA, A, D, SD)
3. When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable (SA, A, D, SD)
4. Most other people are closer to their families than I am (SA, A, D, SD)
5. My family enjoys hearing about what I think (SA, A, D, SD)
6. Members of my family share many of my interests (SA, A, D, SD)
7. Certain members of my family come to me when they have problems or need advice (SA, A, D, SD)
8. I rely on my family for emotional support (SA, A, D, SD)
9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later (SA, A, D, SD)
10. My family and I are very open about what we think about things (SA, A, D, SD)
11. My family is sensitive to my personal needs (SA, A, D, SD)
12. Members of my family come to me for emotional support (SA, A, D, SD)
13. Members of my family are good at helping me solve problems (SA, A, D, SD)
14. I have a deep sharing relationship with a number of members of my family (SA, A, D, SD)
15. Members of my family get good ideas about how to do things or make things from me (SA, A, D, SD)
16. When I confide in members of my family, it makes me uncomfortable (SA, A, D, SD)
17. Members of my family seek me out for companionship (SA, A, D, SD)
18. I think that my family feels that I'm good at helping them solve problems (SA, A, D, SD)
19. I don't have a relationship with a member of my family that is as close as other people's relationships with family members (SA, A, D, SD)
20. I wish my family were much different (SA, A, D, SD)
21. I spend more time on home responsibilities (e.g., cleaning, cooking, laundry, bills) than other the other adult(s) in my home (SA, A, D, SD)
22. I am satisfied with the way the adult(s) in my home have allocated the house responsibilities (SA, A, D, SD)
23. I spend more time care giving as compared to the other adult(s) in my home (SA, A, D, SD)
24. My family supports my work and pursuit of my doctoral degree (SA, A, D, SD)

YOU ARE MORE THAN HALF WAY FINISHED!

Advisor and/or mentor in my department

Please choose the response that best describes you

(Responses: SA= Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)

My advisor and/or mentor in my department...

1. Takes an interest in my personal life (SA, A, D, SD)
2. Cares about me as a whole person, not just as a scholar (SA, A, D, SD)
3. Provides emotional support when I need it (SA, A, D, SD)
4. Is sensitive to my needs (SA, A, D, SD)
5. Has my best interests at heart (SA, A, D, SD)
6. Would support me in any career path I might choose (SA, A, D, SD)

The faculty, students, and department

Please choose the response that best describes your experience

(Responses: SA= Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)

1. In my department, faculty and graduate students can easily balance their work and family lives (SA, A, D, SD)
2. In the event of a conflict, faculty are understanding when graduate students have to put their family first (SA, A, D, SD)
3. In my department it is generally okay to talk about one's family at work (SA, A, D, SD)
4. The chair in my department encourages faculty to be sensitive to graduate students' family and personal concerns (SA, A, D, SD)
5. Graduate students are regularly expected to put their jobs before their families (SA, A, D, SD)
6. In general, faculty in my department are quite accommodating of family related needs (SA, A, D, SD)
7. Many graduate students and faculty are resentful when women in my department take extended leaves to care for newborn or adopted children (SA, A, D, SD)
8. To get ahead in my department, graduate students and faculty are expected to work more than 50 hours a week, whether at the workplace or at home (SA, A, D, SD)
9. To be viewed favorably by my department chair, graduate students and faculty in my department must constantly put their work ahead of their families or personal lives (SA, A, D, SD)
10. In my department graduate students and faculty who participate in available work-family programs (e.g. job sharing, part-time work) are viewed as less serious about their careers than those who do not participate in these programs (SA, A, D, SD)
11. Many graduate students and faculty are resentful when men in my department take extended leaves to care for newborn or adopted children (SA, A, D, SD)
12. In my department it is very hard to leave during the workday to take care of personal or family matters (SA, A, D, SD)
13. My department encourages graduate students to set limits on where work stops and home life begins (SA, A, D, SD)

14. Faculty and the chair in my department are sympathetic toward graduate students' child care responsibilities (SA, A, D, SD)
15. Faculty and the chair in my department are sympathetic toward graduate students' elder care responsibilities (SA, A, D, SD)
16. In my department, graduate students are encouraged to strike a balance between their work and family lives (SA, A, D, SD)
17. In my department, spending long hours on work is valued more than getting the work done (SA, A, D, SD)
18. Doctoral students in my department are sympathetic and supportive of one another (SA, A, D, SD)
19. I rely on other students in my department for emotional support (SA, A, D, SD)
20. I can count on other students in my department if I need help in solving problems (SA, A, D, SD)
21. In my department there are role models of faculty who successfully balance work and family (SA, A, D, SD)

Almost there! You have less than $\frac{1}{4}$ of the survey to complete.

Work and Family Issues

Please choose the one response that best describes your experience

1. The demands of school/work interfere with my home and family life
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

2. The amount of time school/work take up makes it difficult to fulfill family responsibilities
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

3. Things I want to do at home do not get done because of the demands school/work put on me
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

4. My school/work produce strain that makes it difficult to fulfill family duties
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

5. Due to school/work-related duties, I have to make changes to my plans for family activities
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

6. The demands of my family or spouse/partner interfere with school/work-related activities
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

7. I have to put off doing things for school/work because of demands on my time at home
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

8. Things I want to do for school/work don't get done because of the demands of my family or spouse/partner
 - a) 6-7 days per week
 - b) 3-5 days per week
 - c) 1 to 2 days per week
 - d) 1 to 3 days per month
 - e) less than once a month
 - f) never

9. My home life interferes with my responsibilities for school/work such as getting to class/work on time, accomplishing daily tasks, and working overtime

- a) 6-7 days per week
- b) 3-5 days per week
- c) 1 to 2 days per week
- d) 1 to 3 days per month
- e) less than once a month
- f) never

10. Family-related strain interferes with my ability to perform school/work-related duties

- a) 6-7 days per week
- b) 3-5 days per week
- c) 1 to 2 days per week
- d) 1 to 3 days per month
- e) less than once a month
- f) never

Career Choice Preferences

Please choose the response that best describes you

(Responses: SA= Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)

1. When I complete my degree, I am interested in pursuing a tenure track faculty position at a research I university. (SA, A, D, SD)
2. When I complete my degree, I am interested in pursuing a tenure track faculty position at a liberal arts college. (SA, A, D, SD)
3. When I complete my degree, I am interested in pursuing a tenure track faculty position at a community college. (SA, A, D, SD)
4. When I complete my degree, I am NOT interested in pursuing a tenure track faculty position at a university or college. (SA, A, D, SD)
5. I would be more interested in a part-time tenure track position than a full-time tenure track position. (SA, A, D, SD)

Career Choice Preferences

Please rank your interest in each of these positions from 1-4, meaning that 1 would be your first choice and 4 would be your last choice, or mark not applicable if none of the responses match your interests

- A tenure track faculty position at a research I university.
- A tenure track faculty position at a liberal arts college.
- A tenure track faculty position at a community college.
- An adjunct position at a university
- Not applicable

Time

In the past year, what is the average number of hours per week you have spent on each of the following activities (rough estimates)? There are 168 hours in a week.

1. Average # of hours spent in caregiving per week (e.g. meeting the needs of children or teenagers, spouse/partner, elders, friends, other family members)_____
2. Average # of hours spent on housework and home maintenance per week (e.g. shopping, cooking cleaning, paying bills, laundry)_____
3. Average # of hours spent on professional work/job per week(e.g. research, lab work, classes, studying, teaching, research, writing, meetings)_____

Consider the statements below, if you were to secure a tenure track faculty position at a college or university

(Responses: SA= Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree)

1. An option to go part-time at any point in a faculty career to help with family caregiving responsibilities (e.g. to care for a child, spouse/partner, or parent) would be an important professional resource to me. (SA; A; D; SD)
2. Readily available infant care and child care slots in a university sponsored facility for the infants and children of faculty would be an important professional resource for me at some point in my career. (SA; A; D; SD)
3. An emergency back-up child care program with co-pay by users would be an important professional resource for me at some point in my career. (SA; A; D; SD)

Preference for Charity Donation to thank you for your participation.

(Please select one)

The Red Cross

Children's Defense Fund

Cancer treatment and research

Program Addressing Violence Against Women

Whitman Walker Clinic (HIV/AIDS organization)

Appendix E: IRB Approval Letter


**UNIVERSITY OF
MARYLAND**

INSTITUTIONAL REVIEW BOARD

 2100 Lee Building
 College Park, Maryland 20742-5121
 301.405.4212 TEL 301.314.1475 FAX
 irb@deans.umd.edu
 www.umresearch.umd.edu/IRB

February 14, 2006

MEMORANDUM*Application Approval Notification*

To: Dr. Elaine Anderson, Ms. Marta M. McClintock-Comeaux
Department of Family Studies

From: Roslyn Edson, M.S., CIP *RE*
IRB Manager
University of Maryland, College Park

Re: IRB Number 06-0045
Project Title: "Female Doctoral Students' Family and Academic
Department Experiences and Relationships to Career Choices"

Approval Date: February 14, 2006

Expiration Date: February 14, 2007

Type of Application: New Project

Type of Research: Nonexempt
(Please note: This research does not qualify for an exemption because the surveys may not be anonymous and the disclosure of some of the survey responses outside of the research could be damaging to a subject's reputation and/or employability.)

Type of Review For Application: Expedited

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with 45 CFR 46, the Federal Policy for the Protection of Human Subjects, and the University's IRB policies and procedures. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

Recruitment/Consent: For research requiring written informed consent, the IRB-approved and stamped informed consent document is enclosed. The IRB approval expiration date has been stamped on the informed consent document. Please keep copies of the consent forms used for this research for three years after the completion of the research.

Continuing Review: If you intend to continue to collect data from human subjects or to analyze private, identifiable data collected from human subjects, after the expiration date for this approval (indicated above), you must submit a renewal application to the IRB Office at least 30 days before the approval expiration date.

(continued)

Modifications: Any changes to the approved protocol must be approved by the IRB before the change is implemented, except when a change is necessary to eliminate apparent immediate hazards to the subjects. If you would like to modify the approved protocol, please submit an addendum request to the IRB Office. The instructions for submitting a request are posted on the IRB web site at:
http://www.umresearch.umd.edu/IRB/irb_Addendum%20Protocol.htm.

Unanticipated Problems Involving Risks: You must promptly report any unanticipated problems involving risks to subjects or others to the IRB Manager at 301-405-0678 or redson@umresearch.umd.edu.

Student Researchers: Unless otherwise requested, this IRB approval document was sent to the Principal Investigator (PI). The PI should pass on the approval document or a copy to the student researchers. This IRB approval document may be a requirement for student researchers applying for graduation. The IRB may not be able to provide copies of the approval documents if several years have passed since the date of the original approval.

Additional Information: Please contact the IRB Office at 301-405-4212 if you have any IRB-related questions or concerns.

References

- Allen, K. R. (2004). Feminist visions for transforming families: Desire and equality then and now. In M. Coleman & L. H. Ganong (Eds.) *Handbook of contemporary families: Considering the past, contemplating the future*. (pp. 193-206). Thousand Oaks, CA: Sage Publications.
- American Association of University Professors. (2004). *What colleges and universities should know about work/family issues*. Retrieved April 28, 2004 from www.aaup.org/Issues/FamilyWork/
- American Association of University Professors. (2004). *Policy resources*. Retrieved April 28, 2004 from www.aaup.org/Issues/FamilyWork/Policy/policy.htm.
- Barling, J., Kelloway, E. K., & Frone, M. R. (2005). *Handbook of work stress*. Thousand Oaks, CA: Sage Publications.
- Barnett, R. C. (1999). A new work-life model for the twenty-first century. *The Annals of the American Academy of Political and Social Science*, 562, 143-158.
- Barnett, R. C., & Baruch, G. K. (1985). Women's involvement in multiple roles and psychological distress. *Journal of personality and social psychology*, 49, 135-145.
- Barnett, R. C., & Hyde, J. S. (2001). Women, men, work, and family: An expansionist theory. *American psychologist*, 56, 10, 781-796.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51,6, 1173-1182.
- Batt, R., & Valcour, M. (2003). Human resource practices as predictors of work/family outcomes and employee turnover. *Industrial Relations*, 42, 2, 189-220.

- Benjamin, E. (1998). Disparities in the salaries and appointments of academic women and men: An update of a 1988 report of committee W on the status of women in the academic profession. American Association of University Professors. Retrieved May 5, 2005 from www.aaup.org/Issues/WomeninHE/Wrepup.thm
- Bianchi, S. M., & Raley, S. (2003, June). *Changing work and family dynamics*. Paper presented at Workplace/Workforce Mismatch: Work, Family, Health and Well-Being Conference, Washington, DC.
- Blackburn, R. T., & Hollenshead, C. (1999). *University of Michigan faculty work-life study report*. Ann Arbor, MI: Center for the Study of Higher Education and Postsecondary Education, University of Michigan.
- Bowman, R. L., Bowman, V. E. & DeLucia, J. L. (1990). Mentoring in a graduate counseling program: Students helping students. *Counselor education and supervision*, 30, 58-65.
- Bragger, J., Kutcher E., Morgan, J., & Firth, P. (2002). The effects of structured interview on reducing bias against pregnant job applicants. *Sex Roles*, 46, 7&8, 215-226.
- Bridges, E. S., Etaugh, C., & Barnes-Farrell, J. L. (2002). Trait judgments of stay-at-home and employed parents: A function of social role and/or shifting standards? *Psychology of Women Quarterly*, 26, 140-150.
- Budig, M., & England, P. (2001). The wage penalty for motherhood. *American Sociological Review*, 66, 204-225.
- Campos-Outcalt, D., Senf, J., Watkins, A. J., & Bastacky, S. (1995). The effects of medical-school curricula, faculty role models and biomedical research support on

- choice of generalist physician careers- a review and quality assessment of the literature. *Academic medicine*, 70, 7, 611-619.
- Cohen, A. J. (1996). A brief history of federal financing for child care in the United States. *The Future of Children*, 6, 2, 26-40.
- Coltrane, S. (2004). Elite careers and family commitment: It's (still) about gender. *The Annals of the American Academy of Political and Social Science*, 596, 214-220.
- Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and the Family*, 62, 1208-1233.
- Coltrane, S. (1996). *Family man*. New York: Oxford University Press.
- Cornell Employment and Family Careers Institute. (1999). Facts about the demographics of working families. Ithaca, NY: Bronfenbrenner Life Course Center. *Issue Brief*, 2, 1.
- Crosby, F. J., Williams, J. C., & Biernat, M. (2004). The maternal wall. *Journal of Social Issues*, 60, 4, 675-682.
- Cunningham, M. R., & Barbee, A. P. (2000). Social support. In C. Hendrick & S. S. Hendrick (Eds.), *Close relationships*. (pp. 273-285). Thousand Oaks, CA: Sage.
- Dittmann, M. (2005, April). Happy employees make happy families, study finds. *Monitor or Psychology*, American Psychological Association.
- Drago, R., & Colbeck, C. (2003). The mapping project: exploring the terrain of U.S. colleges and universities for faculty and families. State College, PA: The Pennsylvania State University for The Alfred P. Sloan Foundation.

- Duxbury, L., & Higgins, C. (2001). Work-life balance in the new millennium. Where are we? Where do we need to go? CPRN Discussion Paper No. W 12. Ottawa, Ontario. Canadian Policy Research Networks.
- Egdell Becker, P. & Moen, P (1999). Scaling back: Dual earner couples' work-family strategies. *Journal of Marriage and the Family*, 61, 4, 995-1007.
- Firth, M. (1982). Sex discrimination in job opportunities for women. *Sex Roles*, 8, 8, 891-901.
- Fredriksen-Goldesen, K. I. & Scharlack, A. E. (2001). *Families and work: New directions in the twenty-first century*. New York: Oxford University Press.
- Friedan, B. (1963). *The feminine mystique*. New York. W. W. Norton & Company.
- Friegen, K., Biernat, M., Haines, E., & Deaux, K.(2004). Mothers and fathers in the workplace: How gender and parental status influence judgments of job-related competence. *Journal of Social Issues*, 60, 4, 737-754.
- Frone, M. R., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of work-family interface. *Journal of Applied Psychology*, 77, 1, 65-78.
- Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, 50, 145-167.
- Garson, G.D. (2006). Testing of assumptions. North Carolina State University. Raleigh, NC. Retrieved October 14, 2006 from <http://www2.chass.ncsu.edu/garson/pa765/pa765syl.htm>

- Golde, C. M., & Dore, T. M. (2001). At cross purposes: What the experiences of today's doctoral students reveal about doctoral education. Pew Charitable Trust. Retrieved May 23, 2005 from <http://www.phdcompletion.org/promising/Golde.pdf>
- Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, 25, 4, 483-496.
- Gordon, L. (1979). The struggle for reproductive freedom: Three stages of feminism. In Z. R. Eisenstein (Ed.), *Capitalist patriarchy and the case for socialist feminism* (pp. 107-136). New York: Viking.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of management review*, 10, 76-88.
- Gutek, B. A. & Done, R. S. (2001). Sexual harassment. In R.K. Unger (Ed.), *Handbook of the Psychology of Women and Gender* (pp. 367-387). New York: John Wiley.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10, 76-88.
- Grzywacz, J. G., & Butler, A. B. (2005). The impact of job characteristics on work to family facilitation: Testing a theory and distinguishing a construct. *Journal of Occupational Health Psychology*, 10, 2.
- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5, 1, 111-126.
- Hakim, C. (2002). Lifestyle preferences as determinants of women's differentiated labor market careers. *Work and Occupations*, 29, 4, 428-459.

- Harwarth, I., Maline, M., & DeBra, E. (n.d.). Women's colleges in the United States: History, Issues, and Challenges: Executive Summary. Retrieved March 5, 2006 from <http://www.ed.gov/offices/OERI/PLLI/webreprt.html>
- Hays, S. (1996). *The cultural contradictions of motherhood*. New Haven, CT: Yale University Press.
- Heins, M. (1982). The importance of extra-family support on career choices of women. *Personnel and guidance journal*, 60, 8,455-459.
- Hill Collins, P. (1994). Shifting the center: Race, class, and feminist theorizing about motherhood. In E.N. Glenn, G. Chang, & L. Forcey, (Eds.), *Mothering: Ideology, Experience, and Agency* (pp. 45-65). New York: Routledge.
- Hill, M. B. (2005). The annual report of the graduate school 2004-2005. *The graduate school The University of Maryland*. Retrieved October 11, 2006 from <http://www.gradschool.umd.edu/publications/annualreport2005.pdf>
- Hinton, P. R. (1995). *Statistics explained: A guide for social science students*. New York: Routledge.
- Hochschild, A. R., & Machung, A. (1989). *The second shift: Working parents and the revolution at home*. New York: Viking.
- Hoffer, T. B., Welch, V., Williams, K., Hess, M., Webber, K., Lisek, B., Loew, D., & Guzman-Barron, I., (2005). Doctorate recipients from United States universities: summary Report 2004. Survey of Earned Doctorates. University of Chicago. Chicago: National Organization for Research.
- InGoldsby, B.B., Smith, S.R., & Miller, J.E. (2004). *Exploring family theories*. Roxbury Publishing Company, Los Angeles, CA.

- Jacks, P., Chubin, D. E., Porter, A. L. & Connolly, T. (1983). The abcs of abds: A study of incomplete doctorates. *Improving college and university teaching*, 31, 74-81.
- Jacobs, J. A., & Winslow, S. E. (2004). Overworked faculty: Job stresses and family demands. *The Annals of the American Academy of Political and Social Science*, 596, 104-1290.
- Johnston, D. D. Swanson, D. H. (2003). Invisible mothers: A content analysis of motherhood ideologies and myths in magazines. *Sex Roles*, 49, 1-2, 21-33.
- Kahn, R. L., Wolfe, D. M., Quinn, R., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational Stress*. New York: Wiley.
- Kinnunen, U., & Mauno, S. (1998). Antecedents and outcomes of work family conflict among employed women and men in Finland. *Human Relations*, 51, 2, 157-177.
- The Knight Higher Education Collaborative. (September 2001). Gender intelligence. *Policy Perspectives*, 10, 2, 1-12.
- Kobryniewicz, D., & Biernat, M. (1997). Decoding subjective evaluations: How stereotypes provide shifting standards. *Journal of Experimental Social Psychology*, 33, 579-601.
- Konrad, A. M. (2003). Family demands and job attitude preferences: A 4-year longitudinal study of women and men. *Sex Roles*, 49, 1-2, 35-46.
- Kovach, H. R. (2003). Relationships among stress, social support, and burnout in counseling psychology graduate students. *Dissertation abstracts international: B The sciences and engineering*, 63, 7-B, 3477.

- Lino, M. (2005). Expenditures on children by families, 2004. United States Department of Agriculture, Center for Nutrition Policy and Promotion. Washington, DC, publication number 1528-2004.
- Liu, Y. (2002). The role of perceived social support and dysfunctional attitudes in predicting Taiwanese adolescents' depressive tendency. *Adolescence*, 37, 148, 823-834.
- Locke, C. J. (1995). Stress in pediatric faculty – results of a national survey. *Archives of pediatrics and adolescent medicine*, 149, 7, 751-757.
- Lorde, A. (1984). *Sister, outsider*. Trumansburg, NY: Crossing Press.
- Lockett Clark, S., & Weismantle, M. (2003). Employment status 2000: Census 2000 brief. *US Census Bureau*, Washington DC. Retrieved March 5, 2006 from <http://www.census.gov/prod/2003pubs/c2kbr-18.pdf>
- MacDermid, S. M. (2005). (Re)Considering conflict between work and family. In E. E. Kossek & S. J. Lambert (Eds.). *Work and Life Integration: Organization, Cultural, and Individual Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- MacDermid, S. M., Roy, K., & Zvonkovic, A. M. (2005). Don't stop at the borders: Theorizing beyond dichotomies of work and family. In V.L. Bengston, A.C., Acock, K.R. Allen, P Dilworth-Anderson, & D.M. Klein *Sourcebook of family theory and research*. Thousand Oaks, CA: Sage Publications.
- Maher, M. A., Ford, M. E., & Thompson, C. M. (2004). Degree progress of women doctoral students: Factors that constrain, facilitate, and differentiate. *The Review of Higher Education*, 27, 3, 385-408.

- Marks, S. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, 42, 6, 921-936.
- Martinez, G. M., & Day, J. C. (1999). School enrollment-social and economic characteristics of students. US Department of Commerce, US Census Bureau, P20-516. Washington, DC.
- Mason, M. A., & Goulden, M., (2002). Do babies matter? *American Association of University Professors*. Retrieved April 28, 2004 from <http://www.aaup.org/publications/Academe/2002/02nd/02ndmas.htm>
- Mason, M. A., Stacy, A. Goulden, M., Hoffman, C., & Frasch, K. (2005). *University of California faculty family friendly edge: An initiative for tenure-track faculty at the University of California*. Retrieved May 5, 2005 from University of California, Berkeley Web site: <http://ucfamilyedge.berkeley.edu/>
- Matthews, T.J., Hamilton, B.E. (2002). Mean Age of Mother, 1970-2000. National Vital Statistics Reports. Retrieved December 11, 2002 from http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_01.pdf
- McRae, S. (2003). Constraints and choices in mothers' employment careers: A consideration of hakim's Preference Theory. *British Journal of Sociology*, 54, 3, 317-338.
- Moen, P. (November, 2005). Beyond mystiques- The multiple meanings of work and families. Plenary discussion presented at the national conference of the National Council on Family Relations, Phoenix, AZ.
- Moen, P., & Roehling, P. (2004) *The Career Mystique*. Thousand Oaks, CA: Rowman & Littlefield Publishers.

- National Academy of Sciences. (2006). Beyond bias and barriers: Fulfilling the potential of women in academic science and engineering. *National academy of sciences*. Washington, DC.
- National Center for Education Statistics. (2003). Degrees earned by women. Table 20-2. US Department of Education. Retrieved February 13, 2006 from <http://nces.ed.gov/programs/coe/2004/section3/table.asp?tableID=104>
- National Center for Education Statistics. (2000). The integrated postsecondary education data system: Salaries, tenure, and fringe benefits of full-time instructional faculty survey. US Department of Education. Washington, DC: NCES.
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, *81*, 400-410.
- The Office of Institutional Research and Planning. (2006). The enrollment by major publication. *University of Maryland Office of Institutional Research and Planning*. College Park, MD. Retrieved October 7, 2006 from <http://www.oirp.umd.edu/Publications/Enroll/200601/index.cfm>
- Parasuraman, S., & Greenhaus, J. H. (1993). Personal portrait: The lifestyle of women managers. In E. A. Fagenson (Ed.), *Women in management: Trends, issues and challenges, Volume 4* (pp. 186-211). Newbury Park, CA: Sage Publishers.
- Patterson, M., & Sells, L. (1973). Women dropouts from higher education. In A.S. Rossi and A. Calderwood (Eds.). *Academic women on the move*. New York: Russell Sage Foundation.

- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. (2000). Work and family in the 1990s. *Journal of Marriage and the Family*, 62, 981-998.
- Procidano, M. E. & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, 11, 1.
- Ridgeway, D. S., & Correll, S. J. (2004). Motherhood as a status characteristic. *Journal of Social Issues*, 60, 4, 683-700.
- Sanbunjak, D. (2006). Mentoring in academic medicine: A systematic review. *Journal of the American medical association*, 269, 9, 1103-1115.
- Sayer, L. C, (May, 2002). *Gender, time, and inequality: Trends in women's and men's paid work, unpaid work, and free time*. Paper presented at the Annual Meeting of The Population Association of America, Atlanta, GA.
- Smallwood, S. (2005). Faculty salaries rose 2.8%, but failed to keep pace with inflation for the first time in 8 years. *The Chronicle of Higher Education, The Faculty*. Retrieved April 29, 2005 from <http://chronicle.com/weekly/v51/i33/33a01201.htm#average>
- Snover, L. S., & Harris, G. (2003). Aspects of MIT educational experience that might influence whether a woman pursues an academic career in science and engineering. *Internal Research, MIT*, 1-11. Retrieved September 30, 2006 from http://web.mit.edu/ir/reports/MIT_Gender_Report_5-15-03.pdf#search=%22Aspects%20of%20MIT%20educational%20experience%20that%20might%20influence%20whether%20a%20woman%20pursues%20an%20academic%20career%20in%20science%20and%20engineering%22

- Sollie, D.L., & Leslie, L.A. (1994). Why a book on feminist relationship research? In D. L. Sollie & L. A. Leslie (Eds.), *Gender, families, and close relationships* (pp.1-15). Thousand Oaks, CA: Sage Publications.
- South, S., & Spitze, G. (1994). Housework in marital and nonmarital households. *American Sociological Review*, *59*, 327-347.
- Spain, D., & Bianchi, S. M. (1996). *Balancing act: Motherhood, marriage and employment among American women*. New York: Russell Sage Foundations.
- Statham, A., Vaughan, S., & Houseknecht, S. K. (1987). The professional involvement of highly educated women: The impact of family. *The Sociological Quarterly*, *28*, 1, 119-133.
- Thoits, P. A. (1986). Multiple identities: Examining gender and marital status differences in distress. *American Sociological Review*, *51*, 259-272.
- Thompson, C. A., Beauvais, L. L., Lyness, K. S. (1999). When work-family benefits are not enough: The influence of work-family culture on benefit utilization, organization attachment, and work-family conflict. *Journal of Vocational Behavior*, *54*, 392-415.
- Tiedje, L. B. (2004). Processes of change in work/home incompatibilities: Employed mothers 1986-1999. *Journal of Social Issues*, *60*, 4, 787-800.
- Ulku-Steiner, B., Kurtz-Costes, B., & Kinlaw, C. R. (2000). Doctoral students experiences in gender-balanced and male-dominated graduate programs. *Journal of educational psychology*, *92*, 2,296-307.

- United States Census Bureau. (2005b). 2005 American community survey. S1201 Marital status. *United States Census Bureau*. Retrieved October 2, 2006 from http://factfinder.census.gov/servlet/STTable?_bm=y&-geo_id=01000US&-qr_name=ACS_2005_EST_G00_S1201&-ds_name=ACS_2005_EST_G00_
- United States Census Bureau (2005a). Facts for features. Retrieved June 21, 2005 from http://www.census.gov/Press-Release/www/releases/archives/facts_for_features_special_editions/004109.html
- United States Census Bureau. (2002, March). Educational attainment in the United States: March 2002 detailed tables. *United States Census Bureau*. Retrieved February 14, 2004 from <http://www.census.gov/population/socdemo/education/ppl-169/tab01.pdf>
- United States Census Bureau. (2000a). Women: In 2000. Sex by age by employment status for the population 16 years and older. 2000 detailed tables. *United States Census Bureau*. Retrieved March 5, 2006 from http://factfinder.census.gov/servlet/DTable?_bm=y&-geo_id=01000US&-ds_name=DEC_2000_SF3_U&-mt_name=DEC_2000_SF3_U_PCT035
- United States Census Bureau. (2000b). Households and families. Census 2000 Summary File 1. *US Census Bureau*, Washington, DC. Retrieved September 30, 2006 from http://factfinder.census.gov/servlet/QTable?_bm=y&-geo_id=01000US&-qr_name=DEC_2000_SF1_U_QTP10&-ds_name=DEC_2000_SF1_U&-redoLog=false

- United States Census Bureau. (2004). Employment characteristics of families. American Community Survey, 2004. *US Census Bureau*, Washington, DC. Retrieved March 5, 2005 from http://factfinder.census.gov/servlet/STTable?_bm=y&-geo_id=D&-qr_name=ACS_2004_EST_G00_S2302&-ds_name=D&-_lang=en
- United States Census Bureau. (1998). Women's labor force participation and business cycles: 1940-1997). *Statistical Abstract of the United States*, Table 895. Washington, DC. Retrieved September 30, 2006 from <http://www.census.gov/population/www/documentation/twps0032/fig01.gif>
- United States Department of Education. (1994). Percentage of graduate and first-professional students who worked while enrolled and average hours worked per week, by degree program: 1992-93. National Center for Education Statistics, 1992-93 National Postsecondary Student Aid Study (NPSAS:93). Graduate Data Analysis System. Retrieved September 30, 2006 from <http://nces.ed.gov/pubs/web/96235.asp#table3>.
- United States Department of Labor and Statistics. (2005). Women in the labor force: A databook. United States Department of Labor, Bureau of Labor Statistics. Retrieved June 21, 2005 from <http://www.bls.gov/cps/wlf-databook2005.htm>
- Van Anders, S. M. (2004). Why the academic pipeline leaks: Fewer men than women perceive barriers to becoming professors. *Sex roles*, 51, 9-10, 511-521.
- Waller, M. A. (n.d.). Gay men with AIDS: Perceptions of social support and adaptational outcome. Retrieved August 29, 2005 from <http://www.public.asu.edu/~mwaller/GMWA.pdf>
- Walsh, F. (1998). Family resilience. New York: The Guilford Press.

- Weiss, C. S. (1981). The development of professional role commitment among graduate students. *Human Relations*, 34, 1, 13-31.
- Werbel, J. (1998). Intent and choice regarding maternal employment following childbirth. *Journal of vocational behavior*, 53, 372-385.
- Whiston, S. C., & Keller, B. K. (2004). The influences of family of origin on career development: A review and analysis. *The counseling psychologist*, 32, 4, 493-568.
- Williams, J. (2004). Hitting the maternal wall. *American Association of University Professors*. Retrieved February 9, 2005 from <http://www.aaup.org/publications/Academe/2004/04nd/04ndwill.htm>
- Williams, J. (2000). How the tenure track discriminates against women. *The Chronicle of Higher Education*. October 27, 2000.
- Williams, J. (1999). *Unbending gender*. Oxford: Oxford University Press.
- Wilson, R. (2003). How babies alter careers for academics. *The Chronicle of Higher Education*. December 3, 2003. Retrieved from <http://chronicle.com/temp/email.php>
- Withers Osmond, M., & Thorne, B. (1993). Feminist theories: The social construction of gender in families and society. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 591-622). New York: Plenum Press.
- Zhao, C., Golde, C. M., & McCormick, A. C. (2005). *More than a signature: How advisor choice and advisor behavior affect doctoral student satisfaction*. Paper prepared for the conference of the American Educational Research Association. Montreal, Canada.