Factors that contribute to overall job satisfaction among faculty at a large public land-grant university in the Midwest

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Factors that contribute to overall job satisfaction among faculty at a large public land-grant university in the Midwest

by

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A dissertation submitted to the graduate faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Education (Educational Leadership)

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Ames, Iowa
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ABSTRACT

Previous research studies have indicated that academic workplaces that do not acknowledge the multidimensional lives of faculty constitute an unsupportive and unwelcoming environment especially for women faculty who undertake both an academic career and motherhood. In recent years, institutions of higher education have adopted and made available to their faculty dependent care policies that extend beyond the federally mandated Family Medical Leave Act of 1993. These policies include, among others, options that allow faculty members with dependents to elect to stop the tenure clock or to modify their workload (e.g., work part time and reduce course loads and service commitments) for a specified period of time in order to focus on caregiving responsibilities.

Although faculty job satisfaction has been a widely researched topic (e.g., August & Waltman, 2004; Hagedorn, 1996; Johnsrud & Rosser, 2002; Near & Sorcinelli, 1986; Rosser, 2004; Schuster & Finklestein, 2006), few if any studies have measured the impact of dependent care policies on faculty members’ global job satisfaction. This study tested an empirical model to determine the factors, dependent care policies among others, that contribute to overall job satisfaction among tenured and tenure-track faculty at a large public land-grant university in the Midwest and investigated differences between men and women.

This study employed structural equation modeling (SEM) to test the model. Data were collected from Iowa State University (ISU) faculty in 2008 using the Association of American Universities Data Exchange (AAUDE) Faculty Satisfaction Survey. Participants for this study included 644 tenured or tenure-track faculty members who held the position of assistant, associate, or full professor at ISU.
Results were analyzed for all faculty, middle-aged faculty, senior faculty, and men and women. The results indicated that dependent care policies had a negligible direct effect on faculty job satisfaction; a strong and positive effect on academic resources; and a positive and moderate effect on relational support, which proved to be a statistically significant pathway across all samples tested.

The findings of this study provide valuable insight for educators and policy makers who are interested in factors that contribute to overall job satisfaction for female and male faculty members at a large research institution in the Midwest.
CHAPTER 1
INTRODUCTION

Even though more women than men are enrolling in the nation’s institutions of higher education, 55% and 45% respectively, the gender representation among faculty does not reflect the student population that the faculty are charged to educate (Dey & Hurtado, 2005). Women represent 36% of the total faculty in academe (Altbach, 2005). Mason and Goulden (2004) described the employment structure of the academy as one configured for the typical male career of the 19th century, “in which the man in the household is the single breadwinner and the woman is responsible for raising the children” (p. 88). This employment structure is outdated and no longer reflects workplace demographics.

According to Jacobs and Gerson (2004), the integration of work and the rest of life “has emerged as a major social concern” (p. 43) because the typical midcentury family defined by the male breadwinner has now been largely supplanted by dual-earner couples. Although increasingly more women have taken on one or more additional work roles, the traditional roles within families have not shifted to compensate for women’s additional responsibilities.

Previous research studies have indicated that academic workplaces that do not acknowledge the multidimensional lives of faculty constitute an unsupportive and unwelcoming environment especially for women faculty who undertake both an academic career and motherhood. For example, studies have indicated that women faculty forgo or delay childbirth to avoid negative career consequences (e.g., Mason & Goulden, 2004). Also, women with children under the age of 6 and married women are less likely than are women without children and single women to hold tenure-track positions (Perna, 2005a).
Although some of these findings may point to coping deficiencies or women’s decisions to opt out of tenure-track positions, the findings also suggest that underlying structures in academe are limiting career opportunities and advancement for women faculty.

Institutions of higher education are in a position to address practices and processes within academe that result in gender inequities and marginalization of women’s careers (Clark & Corcoran, 1986). Inequities and marginality manifest in a variety of ways. For example, within academe, “women as a group, carry heavier teaching loads, bear greater responsibility for undergraduate education, and have more service commitments. Women also have less access to graduate teaching assistants, travel funds, research monies, laboratory equipment, and release time for research” (Park, 1996, p. 55). These findings suggest the faculty experience, from workload to access to resources that support academic research, differs for men and women.

**Problem**

Universities, as gendered organizations, maintain structures and practices that favor and reward traditional male behaviors and work/life structures (J. Acker, 1990; Williams, 2000). Women who have dependents and are in faculty positions are not promoted and tenured at the same rates as are their male counterparts (Perna, 2005b). Armenti (2004), when referring to the academic work environment, posited that women faculty members are marginalized when they are expected to devote the vast majority of their time to work regardless of family commitments. Mason and Goulden (2004) posited that, in order to promote gender equity in academia, programs and policies must be designed that take family circumstances into account because in the majority of U.S. families working mothers have less time to devote to their careers than do men due to mothers’ greater shares of domestic
and caregiving responsibilities. Hochschild (2003) characterized this phenomenon as a working woman’s “second shift,” whereupon completing an 8-hour day at work, she returns home to play with and bathe the children, feed her family, launder their clothes, and clean the house. This additional job as caregiver continues to be a responsibility undertaken disproportionately by women.

In recent years, institutions of higher education have adopted and made available to their faculty dependent care policies that extend beyond the federally mandated Family Medical Leave Act (FMLA) of 1993. These policies include, among others, options that allow faculty members with dependents to elect to stop the tenure clock or to modify their workload (e.g., work part time and reduce course loads and service commitments) for a specified period of time in order to focus on caregiving responsibilities.

Schuster and Finklestein (2006) posited that, in an ideal world, institutions of higher education “would be able to address faculty attitudes and perceptions of their work systematically . . . from a conceptual perspective,” (p. 126) that includes an investigation of faculty attitudes of the changing nature of their work environment, of which dependent care policies are one example. Although faculty job satisfaction has been a widely researched topic (e.g., August & Waltman, 2004; Hagedorn, 1996; Johnsrud & Rosser, 2002; Near & Sorcinelli, 1986; Rosser, 2004; Schuster & Finklestein, 2006), few if any studies have measured the impact of dependent care policies on faculty members’ global job satisfaction. As more institutions of higher education adopt dependent care policies for faculty members, the potential impacts of these policies on job satisfaction should be explored.
Purpose

This study tested a model of potential pathways leading from institutional characteristics as perceived by faculty to job satisfaction and investigated differences in these paths for women and men in tenured and tenure-track faculty positions.

Research Questions

Are there measurable differences in the extent to which men and women faculty members at Iowa State University are satisfied with their job in light of their perceptions of institutional characteristics, defined by the combination of latent constructs dean/chair leadership and dependent care policies and internal support, defined by the combination of latent constructs academic resources and relational support?

The directional hypotheses driving this study are as follows. Hypotheses H₁ to H₈ were tested using combined faculty data (i.e., both genders) and results were based on the standardized coefficients.

H₁: The perception of academic resources available at the institution to faculty will be positively related to ratings of job satisfaction.

H₂: The perception of relational support available at the institution to faculty will be positively related to ratings of job satisfaction.

H₃: The perception of dean/chair leadership by faculty will be positively related to ratings of job satisfaction.

H₄: The perception of dean/chair leadership by faculty will be positively related to academic resources.

H₅: The perception of dean/chair leadership by faculty will be positively related to relational support.
H6: The perception of institutional dependent care policies for faculty will be positively related to ratings of job satisfaction.

H7: The perception of institutional dependent care policies for faculty will be positively related to the availability of academic resources.

H8: The perception of institutional dependent care policies available at the institution to faculty will be positively related to relational supports.

Using the same measurement model specified for hypotheses H1 to H8, hypotheses H9 to H16 were tested by comparing data from women faculty to data from men faculty. Results were based on the standardized coefficients. The following set of hypotheses was tested to determine whether there are differences between how men and women faculty members construct job satisfaction.

H9: The path coefficients between the perception of dean/chair leadership and job satisfaction will be smaller for female faculty than for male faculty.

H10: The path coefficients between the perception of institutional dependent care policies for faculty and job satisfaction will be larger for female faculty than for male faculty.

H11: The path coefficients between the perception of academic resources available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty.

H12: The path coefficients between the perception of relational support available at the institution to faculty and job satisfaction will be larger for female faculty than for male faculty.

H13: The path coefficients between perceptions of dean/chair leadership and the availability of academic resources will be smaller for female faculty than for male faculty.
H₁₄: The path coefficients between perceptions of institutional dependent care policies and relational support will be larger for female faculty than for male faculty.

H₁₅: The path coefficients between perceptions of dean/chair leadership and the availability of relational support will be larger for female faculty than for male faculty.

H₁₆: The path coefficients between perceptions of institutional dependent care policies and the availability of academic resources will be larger for female faculty than for male faculty.

**Theoretical Framework**

In chapter 2 literature relevant to the theoretical framework that informs this study’s model development and data analysis is introduced. In this study, the critical lens that was adopted wove together concepts of (a) gendered organizational practices and standards that are biased in favor of male-normative behavior, (b) the influence of gender on social structures, and (c) faculty perceptions of institutional environment and satisfaction.

**Significance of the Study**

Although faculty work is often characterized by flexible work schedules and environment, increased workloads and expectations of productivity disproportionately impact faculty members—more often women—who are also the primary caregivers within their family units. This study sought to investigate the ways in which faculty members construct job satisfaction and whether there are differences between men and women. Many of the empirical studies highlighted in chapter 2 present how gendered work environments can hamper the recruitment of and contribute to the marginalization of women scholars. The intent of this study was to test an empirical model to determine the factors that contribute to overall job satisfaction among faculty at a large public land-grant university in the Midwest.
Definitions of Key Terms and Acronyms

This section provides definitions for key terms and acronyms used in this study. Some terms are used interchangeably throughout the dissertation, and these are also noted here.

*Dependent care policies:* referred to in this study are institutional-level policies that are available to faculty *beyond* the federally mandated Family and Medical Leave Act (FMLA) of 1993.

*FMLA:* Family and Medical Leave Act of 1993, a federally mandated law that requires covered employers to provide eligible employees with time off from work in specific situations.

*Gender:* an institutionalized system of social practices for constituting people as two significantly different categories, men and women (Ridgeway & Correll, 2004)

*SEM:* structural equation modeling, the method used in this study to analyze the hypothesized model.

*Social–relational context:* comprises any situation in which individuals define themselves in relation to others (Ridgeway & Correll, 2004)

**Summary**

Findings from this study will inform educators and policy makers who are interested in factors that contribute to overall job satisfaction for female and male faculty members at a large research institution in the Midwest. This study is unique in that it analyzes job satisfaction using a lens that highlights organizations of higher education as gendered workplaces that favor male-normative behavior.
Chapter 2 provides an overview of the relevant research literature that serves as the foundation of the hypothesized model tested in this study.

Chapter 3 provides a detailed description of the methodological approach used in this study, philosophical assumptions related to epistemology, the theoretical model and hypothesized relationships, participants, sample, data collection procedure, variables and instrumentation, data analysis procedure, design issues, delimitations, and limitations.

Chapter 4 presents the results of the model for each tested hypothesis. The results are presented based on the sample tested: all faculty, middle-aged faculty, senior faculty, men, and women.

Chapter 5 provides a summary of the study and an in-depth discussion of the results. Ideas for future research and implications for practice are presented.
CHAPTER 2
LITERATURE REVIEW

This chapter presents a review literature relevant to this study. The theoretical framework that provides the foundation for the design of the causal model that was tested in this study is outlined. Each latent construct that was incorporated into the proposed model is defined and supported by previous research.

This chapter is divided into two sections. The first is a review of relevant literature that contains four topical subsections: faculty job satisfaction, faculty members as caregivers, tenure, and dependent care policies in academe. The second section outlines the literature supporting the theoretical framework informing model development and interpretation of results. It contains two subsections: institutions of higher education as gendered organizations, and establishing institutional characteristics of colleges and universities.

Review of Relevant Literature

Faculty Job Satisfaction

Analyzing job satisfaction among full-time faculty, Schuster and Finklestein (2006) noted a steady decline over a 30-year span of time, 1969–1998, in faculty who were “very satisfied” with their job and a steady increase in faculty who were “somewhat/very dissatisfied” with their job. The researchers attributed this trend to increased workloads for faculty members and decreased academic support provided by the faculty member’s institution. The decline in overall job satisfaction among faculty was consistent regardless of institutional type, field, gender, race, or tenure status. Schuster and Finklestein challenged higher education scholars to gain a better understanding of factors that may be contributing to
the decline in faculty job satisfaction. The present study sought to meet this challenge by measuring a model that includes dependent care policies (e.g., one example of institutional support for faculty members that is becoming increasingly common) as one predictor of global job satisfaction. The hypothesized causal model that was tested included a latent construct, academic resources, that measured faculty satisfaction with workload.

Hagedorn (1996) created a causal model to examine the impact of salary differences between men and women faculty on overall job satisfaction. Although Hagedorn’s model included several latent constructs, those relevant to this study include academic perceptions of students; perceptions of administration; and perceptions of collegiality. Hagedorn, using SEM as her method, found that perceptions of administration and perceptions of collegiality were significant indicators of overall job satisfaction. She also concluded that administrators were critical in creating a work environment that enabled faculty success.

August and Waltman (2004) conducted a study to investigate if differences in job satisfaction existed between tenured and nontenured faculty women. Using Hagedorn’s (1996) conceptual model of faculty job satisfaction, they designed multiple regression models to estimate these differences. Numerous independent variables were included in their regression models such as quality student relations (i.e., the ability to attract students to work with and the level of intellectual stimulation from student interactions), good relations with department chairperson (i.e., quality of feedback from chairperson, sense of support from chairperson, and quality of feedback from reviews), departmental climate (feeling scrutinized by colleagues and perceiving unwritten rules concerning interaction with peers), gender, and collegial relationships (measure of cordial, supportive peers). August and Waltman (2004) found that environmental factors, including those highlighted above, explained a significant
amount of variance in their overall regression model and were thus significant predictors of overall job satisfaction among female faculty.

Near and Sorcinelli (1986) analyzed faculty satisfaction using a combination of predictor variables related to work (e.g., interaction with colleagues and students, opportunity to pursue personal research agendas, and financial rewards) and nonwork (e.g., career opportunities for spouse, family life and childcare options, and family size) conditions. Their study is unique in that it was one of the first job satisfaction studies that focused principally on women faculty. They found that both work and nonwork conditions impacted faculty job satisfaction. Furthermore, the researchers indicated that, because they found a strong correlation between satisfaction with nonwork conditions and satisfaction with work conditions, institutions of higher education should be encouraged to make improvements in the quality of faculty life, improvements that would positively impact the work and nonwork realms of its faculty. The present study extended Near and Sorcinelli’s work by incorporating dependent care policies (i.e., policies intended to improve the quality of faculty members’ lives) into the causal model to measure job satisfaction.

Using multilevel SEM as their method, Johnsrud and Rosser (2002) conducted an empirical study that measured the quality of faculty work/life. The measurement model included latent constructs for professional priorities and rewards, administrative relations and support, and benefits and services associated with the faculty member’s appointment. Although the Johnsrud and Rosser study investigated the connection between faculty work/life and morale, it is important to the present study in that it serves as an example of using SEM to test a model of faculty job satisfaction.
Faculty Members as Caregivers

As institutional demands for faculty work output has steadily risen (Currie, Harris, & Thiele, 2000), faculty members, regardless of their family commitments, are expected to devote more time to the work of the institution. This fosters a portrayal of faculty members who maintain active family engagements—mostly women—as less committed to the institution or less dedicated to their academic work (Armenti, 2004). As organizations created around faculties historically comprised men, universities became and have largely remained gendered organizations that maintain structures and practices that favor and reward “ideal workers” (J. Acker, 1990; Hochschild, 2003) who are unencumbered by domestic responsibilities and thus consistently available to pursue the institution’s work (J. Acker, 1990; Armenti, 2004; Currie et al., 2000; Hochschild, 2003; Williams, 2005).

Faculty work is characterized by a high degree of work flexibility, but faculty members who are also primary family caregivers—more often women—tend to work a “second shift” (Hochschild, 2003) of bathing, feeding, cleaning, planning, managing, and caring. Their time spent on domestic labor is significantly more than time spent by spouses or partners, even when partners are also faculty members (Hewlett, 2007; Mason & Goulden, 2004; Suitor, Mecom, & Feld, 2001). This additional work often results in less time to attend, for example, conferences, social gatherings, or networking events that could help advance their careers.

In comparison, collegial and institutional perceptions of engaged faculty fathers conflict. Some researchers refer to a “daddy privilege” in which fathers are praised as good parents when family commitments encroach on work demands (Perna, 2005a; Williams, 2000), whereas others describe the strong resistance that fathers face when requesting family
accommodations (Rhode & Kellerman, 2008). Although some researchers predict that future
generations of fathers will take on greater dependent care responsibilities and expect
institutions to accommodate their family engagement (S. Acker & Armenti, 2004; Williams,
2000), women faculty members tend to be disproportionately affected “by conflicts between
the ideal academic career trajectory and family needs” (Hollenshead, Sullivan, Smith,

Lester and Sallee (2009) suggested institutions of higher education would be well
advised to transform from an organizational setting that is characterized by a separate spheres
model, in which women kept “their family responsibilities separate from their professional
responsibilities,” (p. 160) to work/life systems frameworks, in which “workers now become
central to the operation of the system. Rather than expecting employees to conform to
predefined norms, the organization is expected to work with employees to create mutually
beneficial practices” (p. 160). By broadening policies that address the needs of faculty
through all stages of their personal and professional development, institutions of higher
education can position themselves as active partners with their faculty and can change
policies and processes within academe that result in inequitable expectations and the
marginalization of certain faculty subgroups, (i.e., women caregivers).

Tenure

Women faculty members’ formations of family and care of dependents correlate
strongly, albeit negatively, with academic career success. Married women and women with
young children are underrepresented among tenured and tenure-track faculty members
(Perna, 2005b), and fewer women than men achieve tenure and promotion to associate
professor (Harper, Baldwin, Gansneder, & Chronister, 2001). Because women frequently
begin their probationary periods during prime childbearing years (Finkel, Olswang, & She, 1994), inflexible tenure systems and inadequate family leave policies may serve to prevent women’s promotion and advancement; the high pressures and limited flexibilities of earning tenure constitute a structural bias against faculty members who care for dependents (Drago & Colbeck, 2003). In response, women faculty members have strategically timed childbirths or adoptions, remained single, foregone having children, hidden pregnancy or adoption plans, or relied on partners to be primary caregivers as ways to accommodate this structural bias (Armenti, 2004; Finkel et al., 1994; Mason & Goulden, 2004).

Some policy researchers have recommended modifying the 7-year tenure timeline in order to promote a family-friendly work environment for academics. Suggested modifications include the availability of tenure-track appointments that are part time in workload with a contract that offers tenure-track extensions (Ward & Wolf-Wendel, 2004) for all faculty who become parents, regardless of whether the faculty member chooses to utilize a family-friendly leave policy (Finkel et al., 1994). Both of these suggested modifications are meant to reduce the pressure faculty, who in this scenario are most often women, experience when they are raising children while simultaneously pursuing tenure.

Dependent Care Policies in Academe

Colleges and universities enact family friendly policies such as dependent care provisions (in addition to the federally mandated FMLA provisions) in part to successfully recruit talented young faculty members (Hollenshead et al., 2005; Ward & Wolf-Wendel, 2004). Prior research has documented the growing availability of dependent care policies and faculty members’ support of birth and infant care accommodations (Ward & Wolf-Wendel, 2005) as well as the importance of chairs’, deans’, and presidents’ strong support
and assurances against negative consequences (Hollenshead et al., 2005). Despite these trends and assurances, women are reluctant to utilize these policies due to suspicions that accepting such accommodations will hurt their career advancement prospects or signal a diminished academic commitment (Armenti, 2004; Finkel et al., 1994; Mason & Goulden, 2004; Ward & Wolf-Wendel, 2004; Wolf-Wendel & Ward, 2003). Such reluctance can be indicative of problems not with individuals but with the climate and culture of academic departments and institutions (Mason & Goulden, 2004; Meyerson, Ely, & Wernick, 2008; Wolf-Wendel & Ward, 2003).

Regardless of gender, rank, tenure, or parental status, the majority of faculty members agree that women faculty should have paid leaves for childbirth recovery and newborn care (Finkel et al., 1994; Ward & Wolf-Wendel, 2005). However, some faculty members are resistant to accommodating faculty who choose to be parents, arguing that family-friendly leave policies are unfair and “privilege breeders at the expense of the childless” (Ward & Wolf-Wendel, 2004, p. 234). Some women faculty members are among the most vocal opponents of family-friendly leave policies, “having succeeded in their own professional life, sometimes by foregoing a spouse or partner or children to do so” (Hollenshead et al., 2005, p. 60). Finally, family-friendly leave policies have been scrutinized for jeopardizing the perceived meritocratic nature of the tenure process by extending benefits to a select group (Armenti, 2004).

Dependent care policies may serve as examples of progressive accommodations for the reasonably high proportion of women faculty members who serve as primary caregivers. However, these policies may instead reinforce traditional gendered assumptions about faculty work and the availability of domestic support, including care for dependents. For example,
the assumption that faculty members’ attention to their academic work is enabled by the ready supply of domestic labor undertaken by a partner or spouse is reflective more of men’s lives than of women’s and reinforces gendered (i.e., masculine) expectations of faculty members’ availability for work and work patterns (J. Acker, 1990; Williams, 2000).

After surveying a random sample of 704 institutions of higher education from the 2000 Carnegie classification list, Hollenshead et al. (2005) found that, on average, institutions of higher education have fewer than two institution-wide family-friendly leave policies. Research universities are the “most likely of institutional types to have formalized” leave policies (Ward & Wolf-Wendel, 2005, p. 69).

Hollenshead et al. (2005) offered the following descriptions of family-friendly leave policies currently in practice. *Tenure clock stop* “allow[s] a tenure-track faculty member to . . . temporarily pause . . . the tenure clock to accommodate special circumstances. At the end of such pause, the clock resumes ticking with the same number of years left to tenure review as when it paused” (Hollenshead et al., 2005, p. 44). *Modified duties* “allow[s] a faculty member to reduce her or his teaching, research, or service load for a temporary period (usually a term or two) without a commensurate reduction in pay” (Hollenshead et al., 2005, p. 44). *Paid leave to recover from childbirth* provides “paid time off for faculty women who are pregnant or recuperating from childbirth” (Hollenshead et al., 2005, p. 44). *Paid dependent care leave* provides leave to care for “ailing parents, spouses, or partners” and “maternity or parental leave and adoptive parent leave” to care for infants (Hollenshead et al., 2005, p. 44).

Stopping the tenure clock was the most common family-friendly leave policy available at institutions of higher education (Hollenshead et al., 2005; Ward & Wolf-Wendel,
Unpaid leave was offered more commonly than was paid leave, and policies that modified a faculty member’s duties usually were targeted to women who had just given birth (Hollenshead et al., 2005). Institutions of higher education continue to create and implement family-friendly leave policies to include adoptive parents and gay faculty (Finkel et al., 1994).

Finally, although dependent care and other family friendly policies are frequently used as tools to help institutions recruit talented young faculty members, the retention benefits of these policies may be overlooked. On average, institutional expenditures to retain a faculty member are markedly lower than are expenditures required to recruit, hire, and equip a new faculty member (Gahn & Carlson, 2008). Attending to the issues faced by faculty who are dependent caregivers and working to make the academic environment conducive to their success thus represents a strategic, long-term investment (Ward & Wolf-Wendel, 2004).

**Theoretical Framework**

**Institutions of Higher Education as Gendered Organizations**

Ridgeway and Correll (2004), when speaking of the power of gender, stated “gender acts as a fundamental principle for organizing social relations in virtually all spheres of social life” (p. 521). They posited that gender, as a system that reinforces difference and promulgates inequality, can be eradicated if men and women refuse to engage in behavior that predominantly favors men. They wrote,

The fact that gender is present in virtually all social relational contexts but is always enmeshed in other identities and activities suggests that these contexts are an arena where cultural beliefs about what gender is and what it means at any given point in a
society are potentially subject to redefinition or change. . . . Social relational contexts evoke preexisting gender beliefs that modestly but persistently bias people’s behavior and their evaluations of self and others in gender-typical ways. Although these biasing effects are contextually variable and often subtle, they are widespread across the many social relational contexts through which people enact society and shape the course of their lives. The cumulative consequence, cross-sectionally between aggregates of men and women and longitudinally over the lives of individuals, is to reproduce patterns of behaviors that appear to confirm that basic structure of gender beliefs. (Ridgeway & Correll, 2004, p. 523)

This is an important concept that the authors point to as it speaks to the self-fulfilling nature of social relational contexts. Gendered patterns of behavior are learned. The next question to be asked is whether and how men and women can learn to acknowledge constructed notions of gender and the impacts on work settings and expectations.

Sandra Acker (1987) described the history of struggles for equality as productive tensions that can stimulate discussions and actions that may result in progress for women and a weakening in male-normative social constructs. She described the relationship between structure and agency as a dilemma facing educational theorists and questioned whether women “should be seen as immobilized by reproductive social and economic structures, by tradition-bound institutions, by discrimination, by men . . . or as . . . active agents, struggling to control and change their lives” (p. 432).

Joan Acker’s (1990) research indicated that gender segregation of the workplace is partly created and maintained through organizational practices. From her perspective, gendering occurs via five interactive processes: the construction of divisions along lines of
gender, the construction of symbols and images that reinforce divisions, processes that produce gendered social structures, processes that produce gendered components of individual identity, and the existence of gender as a fundamental process that creates and conceptualizes social structures (J. Acker, 1990). These practices are illustrated in Figure 2.1.

Hierarchies are established and perpetuated in organizations based on underlying assumptions of gendered expectations (J. Acker, 1990). J. Acker (1990) provided an example of how gendering occurs through the construction of divisions along lines of gender. Those individuals who are committed to paid employment (i.e., unencumbered by medical conditions associated with childbirth or by responsibilities for caregiving) are more suited for

![Figure 2.1](image.png)

*Figure 2.1.* J. Acker’s (1990) theory on how organizations become gendered.
responsibility and authority. In contrast, individuals who choose to divide commitments (e.g., between work and personal responsibilities like caregiving) are relegated to the lower ranks of the organization. This idea reinforces male-normative behavior and supports the notion that organizational practices and expectations are based on career trajectories of men who frequently have few or no responsibilities for domestic caregiving.

Marschke, Laursen, Nielson, and Rankin (2007) found that women faculty members leave academe at higher rates than do their male counterparts. According to their study, women faculty at early career stages (i.e., when child-bearing and tenure pursuits occur simultaneously) and at later career stages (i.e., when women are faced with responsibilities of eldercare) have higher attrition rates than do faculty who are men. They suggested that institutions of higher education be more proactive in understanding the causes of attrition by implementing “interventions to address campus climate, faculty success, and quality of life” (p. 21). Interventions such as the family-friendly leave policies discussed earlier are examples of these efforts.

**Ideal worker.** Academic environments that encourage the ideal worker norm reinforce gender bias in favor of traditional male norms and patterns. Williams (2000) suggested that, unless one challenges “the employer’s right to define the ideal worker as someone who is supported by a flow of family work most men enjoy but women do not” (p. 24), a gendered organizational structure will persist. In this organizational structure, women can perform as ideal workers if they are willing to deprioritize their roles of wife and mother. Alternately, they can pursue “mommy-track” jobs, or positions that enable one to work while still being available to care for dependents. Because a career as a faculty member is not considered a “mommy-track” job, and the demands of tenure and promotion encourage ideal
worker tendencies, women faculty members have forgone or postponed their roles of wife and mother in order to pursue a career as a faculty member. Their male counterparts, however, have not had to choose between the roles of husband and father or faculty member in order to pursue tenure and promotion. This suggests that bias is present in the organizational structure in academe.

The review of literature directly informs the causal model tested in this study. The measurement model that was tested is constructed based on research related to (a) organizational behavior and the process through which organizations create and maintain cultural expectations and norms and (b) how faculty construct job satisfaction.

Establishing Institutional Characteristics of Colleges and Universities

The problem investigated in this study was structural in nature rather than individual. In other words, data analysis and interpretation were framed within the context of organizational control. The study sought to inform administrative leaders of institutions of higher education on the impact of gendered work environments on faculty job satisfaction. This study focused on environmental and institutional culture characteristics as perceived by male and female faculty.

Tierney (1988) stated, “If we are to enable administrators and policy makers to implement effective strategies within their own cultures, then we must first understand a culture’s structure and components” (p. 6). He described six elements that define institutional culture: environment, mission, socialization, information, strategy, and leadership. The present study incorporated three of these elements into the causal model to be tested. Those elements include strategy, as constructed in this study by perceptions of the dependent care policies available at the institution; socialization, as constructed in this study
by the perceptions of relational support at the institution; and leadership, as constructed in this study by the perceptions of the deans’ and chairs’ ability to lead. According to Tierney (1988), the factors that influence strategy include how institutions engage in the decision-making process. Constituents’ opinions and attitudes about how decisions are made and who is involved in the decision-making process is important in defining strategy from an organizational perspective (Tierney, 1988). For purposes of this study, faculty awareness and perceptions of the tenure clock stop policy and the modified duties policy recently developed and implemented at ISU served as measures of organizational strategy.

Tierney (1997) described socialization as the process through which seasoned members of an organization, including leaders at various levels, reinforce certain values and expected modes of behavior when interacting with new members of the organization. He noted that leadership from the president, the dean and, at a more local and accessible level to faculty, the department chair creates and influences cultural expectations and norms. Not only do the individuals in these leadership roles have the power to create cultural conflict, they also have the power to “help foster the development of shared goals” (Tierney, 1988, p. 5). Within the context of this study, it was critical to take into consideration the influence, as perceived by the faculty, that department chairs and deans have in creating and maintaining organizational culture.

Finally, Bilimoria et al. (2006) provided the foundational research upon which the causal model tested for this study was designed. Bilimoria et al., after conducting a survey of faculty at a Midwestern private research university, designed a model to represent ways in which faculty members construct their job satisfaction. They hypothesized that job satisfaction was determined by four primary constructs: institutional leadership, academic
resources, mentoring, and relational support. Bilimoria et al. posited that access to academic resources, which they defined as “research equipment, office and laboratory space, research and teaching assistants, and technical and administrative support” (p. 357) influenced a faculty member’s overall job satisfaction. They described relational support, or “a collegial, inclusive, and respectful immediate work environment . . . trustworthy colleagues . . . opportunities for collaboration” (p. 357), as positive environmental features that influence overall job satisfaction. Finally, Bilimoria et al. suggested that, as “institutional” leaders but at more local, accessible levels, deans and chairs impact overall job satisfaction because they determine who among the faculty gain access to scarce academic resources and they also are ultimately responsible for fostering a work environment that enables faculty success.

Bilimoria et al. found that for all latent constructs except academic resources, the path coefficients were significantly different for men and women. In addition, the path coefficients for institutional leadership, academic resources, and relational support were lower for women than for men, although still positively associated with job satisfaction.

The model hypothesized in this study was heavily influenced by the Bilimoria et al. (2006) research study. This model incorporated three of the constructs analyzed by Bilimoria et al.: institutional leadership, academic resources, and relational support. Considering the literature related to dependent care policies, the hypothesized model built upon Bilimoria et al.’s research by incorporating perceptions of dependent care policies into modeling job satisfaction. As was established earlier, dependent care policies are becoming recruitment tools for universities (Hollenshead et al., 2005; Ward & Wolf-Wendel, 2004). Institutions that provide accommodations, as well as encourage faculty to integrate work and family responsibilities, will likely find their faculty more satisfied with their jobs (Lester & Sallee,
2009). Because universities are likely to have dependent care policies available to their faculty, it is important for institutions of higher education to measure the perceived impact of these accommodations on overall job satisfaction, departmental and college recruitment efforts, and an institution’s ability to retain its faculty. In recent years, the relationship among dependent care policies, faculty work life, and job satisfaction has been well documented through qualitative studies (Hewlett, 2007; Hollenshead et al., 2005; Ward & Wolf-Wendel, 2004), but few quantitative studies exist. This study sought to contribute an empirical analysis of the impact of dependent care policies on faculty job satisfaction through quantitative methods.

Summary

In summary, institutions of higher education maintain policies, procedures, and practices that are biased in favor of male-normative behavior. Women faculty members have been disadvantaged in the tenure process and oftentimes find it difficult to integrate their work and family responsibilities. It is imperative for institutions and for faculty members to assess the work environment to determine the institutional characteristics that most significantly contribute to overall job satisfaction. Armed with this expanded knowledge, colleges and universities, as well as faculty members themselves, are in a position to address practices and behaviors that marginalize faculty who are also caregivers, most often women.
CHAPTER 3
METHODOLOGY

This study tested a hypothesized causal model that was informed by the literature summarized in chapter 2. The study was approached with an objectivist epistemology that incorporated a post-positivist theoretical perspective. Data collected were analyzed using survey research methodology. Epistemology refers to the nature of knowledge (Crotty, 1998). Objectivism “holds that meaning, and therefore meaningful reality, exists as such, apart from the operation of any consciousness” (Crotty, 1998, p. 8). In an objectivist worldview, subjectivity plays no role in research. In this study, parameter estimates and model measurements were analyzed based solely on the data. The subjectivity of the researcher had no influence upon data analysis. The theoretical perspective of post-positivists describes a “way of looking at the world and making sense of it . . . that is, how we know what we know” (Crotty, 1998, p. 8). The theoretical perspective of this study was informed by published research related to faculty job satisfaction, the establishment of institutional characteristics, organizational practices that are gendered and biased in favor of male-normative career trajectories, and the impact of dependent care policies on faculty work/life. Creswell (2009) posited that “problems studied by post-positivists reflect the need to identify and assess the causes that influence outcomes” (p. 7). This study sought to identify and assess how faculty construct job satisfaction, the extent to which dependent care policies influenced job satisfaction, and whether the construction of job satisfaction differed between male and female faculty.
Theoretical Model and Hypothesized Relationships

In this study a model of relationships was tested among variables of faculty perceptions of academic leadership, dependent care policies, relational support, and academic resources and their direct and/or indirect effects on overall job satisfaction. The research question that drove this study was: Are there measurable differences in the extent to which men and women faculty members at Iowa State University are satisfied with their job in light of their perceptions of institutional characteristics and internal support?

The directional hypotheses driving this study were as follows. Hypotheses H₁ to H₈ were tested using combined faculty data (i.e., both genders).

H₁: The perception of academic resources available at the institution to faculty will be positively related to ratings of job satisfaction.

H₂: The perception of relational support available at the institution to faculty will be positively related to ratings of job satisfaction.

H₃: The perception of dean/chair leadership by faculty will be positively related to ratings of job satisfaction.

H₄: The perception of dean/chair leadership by faculty will be positively related to academic resources.

H₅: The perception of dean/chair leadership by faculty will be positively related to relational support.

H₆: The perception of institutional dependent care policies for faculty will be positively related to ratings of job satisfaction.

H₇: The perception of institutional dependent care policies for faculty will be positively related to the availability to academic resources.
H8: The perception of institutional dependent care policies available at the institution to faculty will be positively related to relational supports.

Using the same measurement model specified for hypotheses H1 to H8, hypotheses H9 to H16 were tested by parsing the data by gender. The following set of hypotheses measured whether differences in how faculty construct job satisfaction existed between genders.

H9: The path coefficients between the perception of dean/chair leadership and job satisfaction will be smaller for female faculty than for male faculty.

H10: The path coefficients between the perception of institutional dependent care policies for faculty and job satisfaction will be larger for female faculty than for male faculty.

H11: The path coefficients between the perception of academic resources available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty.

H12: The path coefficients between the perception of relational support available at the institution to faculty and job satisfaction will be larger for female faculty than for male faculty.

H13: The path coefficients between perceptions of dean/chair leadership and the availability of academic resources will be smaller for female faculty than for male faculty.

H14: The path coefficients between perceptions of institutional dependent care policies and relational support will be larger for female faculty than for male faculty.

H15: The path coefficients between perceptions of dean/chair leadership and the availability of relational support will be larger for female faculty than for male faculty.
H₁₆: The path coefficients between perceptions of institutional dependent care policies and the availability of academic resources will be larger for female faculty than for male faculty.

**Discussion of Model Components**

The model constructed in this study was based on previous theoretical models and published research. Figure 3.1 and Figure 3.2 illustrate the proposed structural equation model using latent variables. The unidirectional arrows represent the causal relationship; that is, the variable at the base of the arrow is hypothesized to “cause” the variable at the head of the arrow, observed variables are enclosed in boxes, latent variables are circled, and a curved two-headed arrow signifies an unanalyzed association (e.g., correlation) between two variables (Bollen, 1989). Because all of the paths in the model specify only one direction of causality, the model in this study is recursive.

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**Legend**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>ξ1</td>
<td>Dean/chair leadership</td>
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<tr>
<td>ξ2</td>
<td>Dependent care policies</td>
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<tr>
<td>η1</td>
<td>Academic resources</td>
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<td>η2</td>
<td>Relational support</td>
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<td>SAT</td>
<td>Job satisfaction</td>
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<tr>
<td>ζ1</td>
<td>Residual for η1</td>
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<tr>
<td>ζ2</td>
<td>Residual for η2</td>
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</table>

*Figure 3.1. Hypothesized model of how faculty construct job satisfaction.*
Figure 3.2. Proposed hypothesized measurement model of how faculty construct job satisfaction.
Bollen (1989) also distinguished notations for measurement models as follows:

- $y$ denotes observed indicators of $\eta$ (eta);
- $x$ denotes observed indicators of $\xi$ (xi);
- $\varepsilon$ (epsilon) indicates measurement errors associated with $y$;
- $\delta$ (delta) denotes measurement errors associated with $x$;
- $\zeta$ (zeta) denotes measurement errors associated with endogenous variables, $\eta$ (eta).
- $\gamma$ (gamma) denotes the regression coefficient for exogenous to endogenous causal links;
- $\beta$ (beta) is the regression coefficient matrix for endogenous to endogenous causal links.

The model in Figure 3.3 specifies eight hypothesized causal relationships ($H_1$–$H_8$) that were simultaneously tested (Bollen, 1989) in this study. The first hypothesized relationship is that perceptions of academic resources available at the institution to faculty will be positively related to ratings of job satisfaction. The second hypothesized relationship is that perceptions of relational support available at the institution to faculty will be positively related to ratings of job satisfaction. The third hypothesized relationship is that perceptions of dean/chair leadership by faculty will be positively related to ratings of job satisfaction.

**Figure 3.3.** Model denoting hypotheses 1 to 8.

Legend
- $\xi_1$: Dean/chair leadership
- $\xi_2$: Dependent care policies
- $\eta_1$: Academic resources
- $\eta_2$: Relational support
- SAT: Job satisfaction
- $\zeta_1$: Residual for $\eta_1$
- $\zeta_2$: Residual for $\eta_2$
The fourth hypothesized relationship is that perceptions of dean/chair leadership by faculty will be positively related to the availability of academic resources. The fifth hypothesized relationship is that perceptions of dean/chair leadership by faculty will be positively related to the availability of relational support. The sixth hypothesized relationship is that perceptions of institutional dependent care policies for faculty will be positively related to ratings of job satisfaction. The seventh hypothesized relationship is that perceptions of institutional dependent care policies for faculty will be positively related to the availability of academic resources. The eighth hypothesized relationship is that perceptions of institutional dependent care policies available at the institution to faculty will be positively related to the availability of relational supports.

The model in Figure 3.4 specifies eight additional hypothesized causal relationships (H9–H16) that were simultaneously tested (Bollen, 1989) by parsing the data by gender. This was done to analyze whether differences occur in how men and women faculty constructed job satisfaction.

There were eight hypothesized relationships that were tested, noted as H9–H16 in Figure 3.4. The ninth hypothesized relationship is that the path coefficients between the perception of dean/chair leadership available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty. The tenth hypothesized relationship is that the path coefficients between the perception of institutional dependent care policies available at the institution to faculty and job satisfaction will be larger for female faculty than for male faculty. The eleventh hypothesized relationship is that the path coefficients between the perception of academic resources available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty. The twelfth
Figure 3.4. Structural model (denoting hypotheses 9 to 16) analyzed by gender.

The hypothesized relationship is that the path coefficients between the perception of relational support available at the institution to faculty and job satisfaction will be larger for female faculty than for male faculty. The thirteenth hypothesized relationship is that the path coefficients between perceptions of dean/chair leadership and academic resources will be smaller for female faculty than for male faculty. The fourteenth hypothesized relationship is that the path coefficients between perceptions of institutional dependent care policies and relational support will be larger for female faculty than for male faculty. The fifteenth hypothesized relationship is that the path coefficients between perceptions of dean/chair leadership and relational support will be larger for female faculty than for male faculty. The sixteenth hypothesized relationship is that the path coefficients between perceptions of institutional dependent care policies and academic resources will be larger for female faculty than for male faculty.
Methods

This section describes the site participants, sample, and the procedure for data collection.

Site

ISU is a large, public land-grant university, chartered in 1864 and located in central Iowa (Iowa State University [ISU], n.d.). In the Fall 2009 term, ISU enrolled 27,945 undergraduate, professional, and graduate students in seven schools (Agriculture & Life Sciences, Business, Design, Engineering, Human Sciences, Liberal Arts, and Veterinary Medicine; ISU, n.d.). In Fall 2009, ISU employed 1,746 faculty (ISU, n.d.). ISU is a member of the AAU (Association of American Universities) and has a Carnegie Classification of Doctoral/Research Universities–Extensive.

In 2002, ISU approved appointment extensions (i.e., tenure clock stops) for probationary faculty who experience certain circumstances, such as the birth or adoption of a child or other work–life responsibilities, and who desire additional time to demonstrate his or her qualifications for tenure. This policy is written into the ISU Faculty Handbook and reads in part, “requests for extension due to the birth of a child or the adoption of a child under age five will be submitted to and approved by the chair, dean of the college, and provost” (ISU, 2010, section 5.2.1.4). Available only to tenured and tenure-track faculty, is the option to reduce their appointment to part time for “personal or professional issues, including work/life balance” (ISU, 2010, section 3.3.1.1).

Survey Instrument

Data were collected from ISU faculty in 2008 using the Association of American Universities Data Exchange (AAUDE) Faculty Satisfaction Survey (Appendix A). AAUDE
comprises institutions belonging to the AAU that wish to exchange data to support and inform policy initiatives at their respective universities (Association of American Universities Data Exchange, 2010). The Faculty Satisfaction Survey is only one of the surveys developed and implemented under the auspices of the AAUDE.

The AAUDE faculty satisfaction survey collects individual data from faculty members on the following topics: overall job satisfaction, work environment, faculty resources, mentoring, sources of stress, tenure and promotion, hiring and retention, and life outside the institution. Although the core survey instrument was created collaboratively by a group of institutional research professionals representing AAUDE member universities, each participating institution has the option to add institution-specific questions to the survey. In advance of the 2008 administration, ISU researchers added survey items relating to ISU work/life policies relevant to dependent care.

Participants and Sample

Participants for this study included 644 tenured or tenure-track faculty members who held the position of assistant, associate, or full professor at ISU. This sample size represented 49.0% of the target population. At the time the survey was administered in 2008, 1,314 tenured or tenure-track faculty members were employed at ISU. Participants were contacted via e-mail. All members of the population were invited by e-mail to participate in the survey so there was 100% sampling coverage.

Data Collection Procedures

Participants received an e-mail that introduced the study and provided a link that directed them to the online survey. Participants were told the survey would take approximately 15–20 minutes to complete, and participants were allowed to skip questions
they did not wish to answer. Participants were allowed to complete a portion of the survey and return to the survey at another time. Survey responses were saved and retrieved once a participant completed the survey. Participation in the survey was voluntary and participants could leave the study at any time. Departing the study or nonresponse did not result in any penalties or loss of benefits for individuals. All responses were treated as confidential. Personal identifiers were removed from the dataset by ISU Office of Institutional Research staff before the data were accessed for the present study.

Variables

The proposed hypothesized model, complete with all variables, is shown in Figure 3.2. The model comprises 19 observed variables related to dean/chair leadership, dependent care policies, academic resources, relational support and job satisfaction; 20 variables related to demographic information were used to describe the sample; 2 latent exogenous variables, $\xi_1$ (DEAN/CHAIR LDRSHP) and $\xi_2$ (DEP CARE POL); and 2 latent endogenous variables, $\eta_1$ (ACAD RES) and $\eta_2$ (RELATNL SUPP).

Independent variables. The latent variable $\xi_1$ (DEAN/CHAIR LDRSHP) is an exogenous latent construct that has a causal relationship with $\eta_1$ (ACAD RES) and $\eta_2$ (RELATNL SUPP). The latent variable $\xi_2$ (DEP CARE POL) is an exogenous latent construct that has a causal relationship with $\eta_1$ (ACAD RES) and $\eta_2$ (RELATNL SUPP).

Dean/chair leadership. $\xi_1$ (DEAN/CHAIR LDRSHP) is an exogenous latent construct that was constructed on the following four observed variables: CHCSE (“My chair creates a collegial and supportive environment”), CHRES (“My chair helps me obtain the resources I need”), DCSE (“My dean creates a collegial and supportive environment”), and DRES (“My dean helps me obtain the resources I need”). The latent variable construct
DEAN/CHAIR LDRSHP is shown in Figure 3.5. As noted by the curved two-way arrow linking DRES and DCSE, these two variables were found to be correlated and the correlation was found to be statistically significant ($r = 0.740, p = .01$). DRES and CHRES were also correlated ($r = 0.567, p = .01$) as were CHRES and CHCSE ($r = 0.733, p = .01$). See Table 3.1 for a review of the Pearson bivariate correlations among the indicator variables in the revised hypothesized measurement model. The responses for the indicator variables CHCSE, CHRES, DCSE, and DRES were coded as follows: $1 = \text{strongly disagree}$, $2 = \text{somewhat disagree}$, $3 = \text{neither agree nor disagree}$, $4 = \text{somewhat agree}$, $5 = \text{strongly agree}$. See Appendix B for the data codebook.

*Figure 3.5.* Latent variable construct, dean/chair leadership.
Table 3.1.

*Correlations Among Endogenous Variables*

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<tbody>
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<td>1. Teaching responsibilities (TEACH)</td>
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<td>2. Access to TAs (TA)</td>
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<td>3. Advising responsibilities (ADV)</td>
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<td>4. Quality of graduate students (QGRAD)</td>
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<td>5. Time available for scholarly work (TIMES)</td>
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<td>.371**</td>
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<td>.247**</td>
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<tr>
<td>6. Colleagues value my research (CVRES)</td>
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<td>.247**</td>
<td>.175**</td>
<td>.271**</td>
<td>.288**</td>
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<td>7. Colleagues value my teaching (CVTCH)</td>
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<td>.221**</td>
<td>.218**</td>
<td>.313**</td>
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<td>.612**</td>
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<tr>
<td>8. Opportunities to collaborate in department (COLLD)</td>
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<td>.236**</td>
<td>.188**</td>
<td>.259**</td>
<td>.244**</td>
<td>.530**</td>
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<tr>
<td>9. Chair creates supportive environment (CHCSE)</td>
<td>.272**</td>
<td>.288**</td>
<td>.202**</td>
<td>.250**</td>
<td>.233**</td>
<td>.461**</td>
<td>.390**</td>
<td>.404**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Dean creates supportive environment (DCSE)</td>
<td>.272**</td>
<td>.235**</td>
<td>.234**</td>
<td>.186**</td>
<td>.285**</td>
<td>.320**</td>
<td>.248**</td>
<td>.304**</td>
<td>.491**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Chair helps me obtain resources (CHRES)</td>
<td>.305**</td>
<td>.316**</td>
<td>.243**</td>
<td>.255**</td>
<td>.288**</td>
<td>.417**</td>
<td>.373**</td>
<td>.375**</td>
<td>.731**</td>
<td>.446**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Dean helps me obtain resources (DRES)</td>
<td>.249**</td>
<td>.254**</td>
<td>.247**</td>
<td>.229**</td>
<td>.340**</td>
<td>.303**</td>
<td>.249**</td>
<td>.286**</td>
<td>.400**</td>
<td>.738**</td>
<td>.564**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Tenure clock policy shows ISU is supportive of family issues (TCSFI)</td>
<td>.157**</td>
<td>.182**</td>
<td>.114*</td>
<td>.079</td>
<td>.090*</td>
<td>.171**</td>
<td>.180**</td>
<td>.249**</td>
<td>.147**</td>
<td>.141**</td>
<td>.160**</td>
<td>.163**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Tenure clock policy will help ISU recruit faculty (TCREC)</td>
<td>.091*</td>
<td>.115**</td>
<td>.039</td>
<td>.056</td>
<td>.007</td>
<td>.132**</td>
<td>.189**</td>
<td>.081</td>
<td>.108**</td>
<td>.120**</td>
<td>.139**</td>
<td>.476**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Tenure clock policy will help ISU retain faculty (PTRET)</td>
<td>.080</td>
<td>.045</td>
<td>.047</td>
<td>.066</td>
<td>.008</td>
<td>.073</td>
<td>.113**</td>
<td>.045</td>
<td>.022</td>
<td>.080</td>
<td>.070</td>
<td>.166**</td>
<td>.410**</td>
<td>.555**</td>
</tr>
</tbody>
</table>

*p < .05.  **p < .01.
**Dependent care policies.** \( \xi_2 \) (DEP CARE POL) is an exogenous latent variable that was constructed on the following observed variables (see Figure 3.6): TCTEN (“Using the tenure clock policy might hurt a faculty member’s chances for tenure”), TCSFI (“Having a tenure clock policy shows that Iowa State is supportive of family issues”), TCREC (“The tenure clock policy will help Iowa State recruit faculty”), TCLEG (“Care of a family member is not a legitimate reason to grant extra time for tenure”), PTTEN (“Using the part-time policy would hurt a faculty member’s chances for tenure or promotion”), PTRET (“The part-time policy will help Iowa State retain qualified faculty members”). See Appendix C for a list of the dependent care policies in place at ISU. See Appendix B for the codebook.

*Figure 3.6. Latent variable construct, dependent care policies.*
**Academic resources.** η₁ (ACAD RES) is an endogenous latent variable that was constructed on the following observed variables: TEACH (teaching responsibilities), TA (access to teaching assistants), ADV (advising responsibilities), QGRAD (quality of graduate students), and TIMES (time available for scholarly work). These variables were from Question 4, which asked, “Specify the degree to which you are satisfied with the following faculty responsibilities.” See Appendix B for the codebook and information on how the responses were scaled. Figure 3.7 depicts the structural model for ACAD RES.

**Relational support.** η₂ (RELATNL SUPP) is an endogenous latent variable that was constructed on the following observed variables: COLLD (“I am satisfied with opportunities to collaborate with faculty in my primary department”), CVTCH (“My colleagues value my teaching”), and CVRES (“My colleagues value my research”). As noted by the two-way

![Figure 3.7. Latent variable construct, academic resources.](image-url)
curved arrow linking CVTCH and CVRES in Figure 3.8, these two variables were found to be correlated \( (r = .616, p = .01) \). COLLD and CVRES were also correlated \( (r = .526, p = .01) \). These variables were captured by Question 8. See Appendix B for the codebook and information on how the responses are scaled. Figure 3.8 depicts the structural model for RELATNL SUPP.

\[ \text{Figure 3.8. Latent variable construct, relational support.} \]

**Descriptive variables.** In this study, data from the survey’s *life outside the institution* and *demographics* sections were used to collect demographic information about the participants. Data were captured on: workload, caregiving responsibilities, awareness of the tenure flexibility policies available to faculty at ISU, whether the participants had a spouse or a domestic partner, how many children the participants had, the ages of those children, total number of years as a faculty member at ISU, rank, and employment status. These variables
are not part of the measurement model. The data are used to provide a descriptive portrayal of the faculty at ISU.

**Selection variable.** The sex of the participants was not collected on the survey instrument. However, the Office of Institutional Research added this variable to the dataset before the dataset was provided for this study. This dichotomous variable, SEX, was coded 0 for male and 1 for female.

**Dependent variable.** The observed dependent variable in this study was overall job satisfaction. Question 1 stated, “Overall, how satisfied are you being a faculty member at Iowa State?” The possible responses were *very dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied, and very satisfied.* Numerical values from 1 to 5 were assigned to these responses, with *very dissatisfied* coded as 1 and *very satisfied* coded as 5. See Figure 3.1 for the structural model. See Appendix B for the complete codebook. A copy of the survey can be found in Appendix A.

**Data Analysis Procedures**

This study employed SEM to test the model. SEM is not a single statistical technique but a family of related and interconnected procedures (Bollen, 1989). Byrne (2001) described three primary aspects of SEM that separate it from other procedures involving multivariate analysis. First, SEM “takes a confirmatory, rather than an exploratory, approach to the data analysis” (Byrne, 2001, p. 3). This aspect is demonstrated by the construction of a hypothesized model based on published theory and research. The variables that make up the latent constructs are included in this model to hypothesize that the data fit the theories. Second, although traditional regression assumes that independent variables are perfectly measured, SEM is capable of “assessing or correcting for measurement error” (Byrne, 2001,
As this model indicates, each independent variable is portrayed by two parts: the observed variable, as noted by a square box, and an error term ($\varepsilon$ or $\delta$), as noted by a circle. By accounting and correcting for measurement error, the estimated causal effects are a more accurate measure of the actual impacts in the population i.e., $\Sigma = \Sigma(\theta)$, where $\Sigma$, sigma, represents the population of ISU faculty and $\theta$, theta, represents the sample of ISU faculty in the analyzed dataset. Finally, SEM is the only statistical technique that can estimate a model that includes both “observed and unobserved variables” (Byrne, 2001, p. 4). In the hypothesized model, observed variables are contained in squares and unobserved variables are contained in circles.

Structural equation models comprise two submodels, the first known as a measurement model and the second called the structural model. The measurement model “defines relations between the observed and unobserved variables . . . it provides the link between scores on a measuring instrument (i.e., the observed indicator variables) and the underlying constructs they are designed to measure (i.e., the unobserved latent variables)” (Byrne, 2001, p. 12). The structural model “defines relations among the unobserved variables. Accordingly, it specifies the manner by which particular latent variables directly or indirectly influence (i.e., “cause”) changes in the values of certain other latent variables in the model” (Byrne, 2001, p. 12). See Figure 3.9 for an example of the submodels of SEM.

**Missing data.** Some data were missing at the individual response level. Issues related to missing data were resolved by utilizing the data imputation application in AMOS. Missing values were predicted using the regression imputation option, which calculated predicted values using maximum likelihood (ML) estimates. The advantages of using ML estimates for predicting missing values that are consistent, efficient, and asymptotically
Figure 3.9. Submodels in a structural equation measurement model.
unbiased is theoretically grounded (Byrne, 2001). Missing data were imputed for independent variables only. Nine cases were removed from the dataset because the dependent variable, SAT, contained a missing value.

**Data reduction techniques.** In this study, confirmatory factor analysis was used as a data reduction technique. Specifically, tested covariances were tested among the observed variables that made up the latent constructs for \( \xi_2 \), dependent care policies; \( \eta_1 \), academic responsibilities; and \( \eta_2 \), relational support.

The data were analyzed using scatter plots and box plots to test for homoscedasticity (Urdan, 2005), and correlation tables were analyzed on the independent variables to test for covariance (Gujarati, 2006). Based on the results of these data reduction techniques, the path model was respecified to insure that the model remained identified and that the optimum model fit could be achieved (Bollen, 1989; Byrne, 2001; Kline, 2005). For the latent construct \( \xi_2 \), dependent care policies, three indicator variables (TCLEG, TCTEN, and PTTEN) were deleted from the proposed construct (see Table 4.5 for the results of the principle component analysis).

**Model identification.** Four primary restrictions were imposed on the causal model to insure the model remained over-identified. Bollen (1989) suggested that under-identification can be avoided by scaling each latent factor to one observed variable. As shown in Figure 3.2, the path from DEAN/CHAIR LDRSHP to CHCSE was scaled to one as were the paths from DEP CARE POL to TCTEN, from ACAD RES to QGRAD, and from RELATNL SUPP to COLLD. The second restriction Bollen suggested was to set all residual coefficients (noted by \( \delta \) and \( \varepsilon \)) to 1, thereby making the residual matrix an identity matrix. The third restriction was to scale the variance of one higher order latent variable to 1, which
was done with DEAN/CHAIR LDRSHP. Finally, the fourth restriction was to scale the regression coefficient for the residuals of the endogenous latent variables ($\zeta_1$ and $\zeta_2$) to 1, as shown in Figure 3.2.

**Model fit.** Byrne (2001) stated, “It is highly unlikely that a perfect fit will exist between the observed data and the hypothesized model, there will necessarily be a differential between the two; this differential is termed the residual” (p. 7). Byrne described the model-fitting process as follows:

\[
\text{Data} = \text{Model} + \text{Residual}
\]

where Data represents score measurements related to the observed variables as derived from persons comprising the sample; Model represents the hypothesized structure linking the observed variables to the latent variables, and in some models, linking particular latent variables to one another; and Residual represents the discrepancy between the hypothesized model and the observed data (p. 7).

The goodness of fit statistics used in this study to determine overall model fit include the model chi square ($\chi^2_M$), the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). These goodness of fit statistics were selected because they reflect the “current state of practice and recommendations about what to report in written summaries of the analysis” (Kline, 2005, p. 134).

AMOS 18.0 statistical software was used to conduct data analysis.

**Delimitations**

The scope of this study was confined to a very specific population: faculty at a public land-grant university in the Midwest. The study tested a hypothesized causal model that was
constructed from published research and theory to estimate if the data collected from 636 tenured and tenure-track ISU faculty fit the model.

**Reliability and Validity**

Two basic properties of empirical measurement determine the extent to which the results of a study represent a given theoretical concept: reliability and validity (Carmines & Zeller, 1979). “Reliability concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trial” (Carmines & Zeller, 1979, p. 11). The Office of Institutional Research compared the responses of ISU faculty in tenure-track positions (with the rank of assistant professor) who completed the ISU AAUDE Faculty Satisfaction Survey in 2008 to the responses of ISU faculty in tenure-track positions (with the rank of assistant professor) who completed the Collaborative on Academic Careers in Higher Education (COACHE) survey administered in 2006. Responses were compared on four questions that measured the same construct. The comparison showed similar responses across the two surveys. See Appendix D for the comparison.

Internal validity is defined as the “extent to which any measuring instrument measures what it is intended to measure” (Carmines & Zeller, 1979, p. 17). The causal model in this study was designed based on theoretical constructs previously established in the scholarly literature. In addition, responses were collected from almost half (49.0%) of the faculty employed at ISU. The Office of Institutional Research, the entity that administered the survey and compiled the data, indicated that the sample population represented the target population. In addition, select results of the survey data as compiled by the Office of Institutional Research were compared to a similar survey administered to a similar population
in 2006, COACHE (see Appendix D). Based on this, one can conclude that the results are valid and can be generalized to the target population.

**Limitations Related to Design Issues**

Nonresponse bias could certainly be a limitation to this study. No survey is perfect and, as with any instrument, there are limitations to what it can measure. Nonresponse error is inevitable (Groves & Peytcheva, 2008). Those who chose to not respond ($n = 678$) to the survey may have attitudes and beliefs that are different from those who did complete the survey ($n = 636$). If the nonrespondents had different attitudes or beliefs relevant to the topic under study, then these attitudes cannot be accounted for in this analysis. Nonresponse error in the ISU AAUDE Faculty Satisfaction survey could contribute to biased estimates that in turn may not be truly generalizable to the target population (Groves & Peytcheva, 2008).

The data were not disaggregated to the departmental level, meaning participants’ responses were not analyzed based on the department of which each individual was a member. This insured the participant’s identity remained confidential, but presented a limitation to the study in that the results can be generalizable and relevant to macro groups only. Department chairs or university administrators who may be interested in results on the micro (department) level will not find the results useful for assessing satisfaction or climate issues within their departments.

The dependent care policy construct comprised variables related to faculty opinions on how dependent care policies might impact Iowa State University as an organization. The results of this study could be different if the construct comprised variables related to faculty opinions on how the dependent care policies impact them as individuals.
Prior published research has found that satisfaction with salary and compensation are important predictors in overall faculty job satisfaction. Satisfaction with salary is an observed variable that was not included in this study. The model tested in this study was designed to confirm prior published research by Bilimoria et al (2006), and therefore, the predictor variables included in the Bilimoria et al study were replicated in the model tested in this study.

A final limitation to this study is that it analyzed data on faculty satisfaction from a single, large, public land-grant institution in the Midwest. This study does not claim causal inferences for all land-grant universities or all universities with AAU membership.
CHAPTER 4
RESULTS

This chapter provides a comprehensive overview of the results of this study and is organized into three sections. The first section provides an analysis of the descriptive statistics of the population in this study. The second section describes tenets associated with SEM of latent variables. The final section includes an analysis of the results for each hypothesis.

Descriptive Analyses

As a precursor to the multivariate analysis, an examination of the variables used in the measurement model is presented and descriptive statistics of the population in this study is provided. As noted in chapter 3, a codebook is provided in Appendix B and provides a definition of each variable as well as details on how each variable is coded and scaled. Table 4.1 reflects the means and standard deviations of the variables included in the measurement model and provides a snapshot of faculty job satisfaction at ISU. The endogenous latent variable, academic resources, was constructed on the following observed variables: TEACH (teaching responsibilities), TA (access to teaching assistants), ADV (advising responsibilities), QGRAD (quality of graduate students), and TIMES (time available for scholarly work). Two of the five observed variables in the latent construct contained missing data. Because 83.5% of responses were valid for the variable ADV (advising responsibilities) and 84.6% of responses were valid for the variable TA (access to teaching assistants), the variables were examined based on sex, tenure status, rank, department, employment status (full-time or part-time), age, and hire date to determine if there were patterns in the missing data. No patterns emerged.
Table 4.1.

*Descriptive Statistics for the Variables in the Tested Model (N = 636)*

<table>
<thead>
<tr>
<th>Measured variable (variable name in parentheses)</th>
<th>M</th>
<th>SD</th>
<th>Valid responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent variable: dean/chair leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dean creates collegial and supportive environment (DCSE)*</td>
<td>3.29</td>
<td>1.370</td>
<td>608</td>
</tr>
<tr>
<td>Dean helps me obtain needed resources (DRES)*</td>
<td>3.05</td>
<td>1.286</td>
<td>594</td>
</tr>
<tr>
<td>Chair creates collegial and supportive environment (CHCSE)*</td>
<td>3.78</td>
<td>1.380</td>
<td>619</td>
</tr>
<tr>
<td>Chair helps me obtain needed resources (CHRES)*</td>
<td>3.50</td>
<td>1.302</td>
<td>614</td>
</tr>
<tr>
<td>Latent variable: dependent care policies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a tenure clock policy shows that Iowa State is supportive of family issues (TCSFI)*</td>
<td>4.03</td>
<td>0.871</td>
<td>610</td>
</tr>
<tr>
<td>The tenure clock policy will help Iowa State recruit faculty (TCREC)*</td>
<td>3.54</td>
<td>0.990</td>
<td>608</td>
</tr>
<tr>
<td>The part-time policy will help Iowa State retain qualified faculty members (PTRET)*</td>
<td>3.57</td>
<td>0.978</td>
<td>606</td>
</tr>
<tr>
<td>Latent variable: academic resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of graduate students, degree to which you are satisfied (QGRAD)*</td>
<td>3.43</td>
<td>1.145</td>
<td>583</td>
</tr>
<tr>
<td>Teaching responsibilities, degree to which you are satisfied (TEACH)*</td>
<td>4.08</td>
<td>1.017</td>
<td>613</td>
</tr>
<tr>
<td>Access to teaching assistants, degree to which you are satisfied (TA)*</td>
<td>3.13</td>
<td>1.368</td>
<td>538</td>
</tr>
<tr>
<td>Advising responsibilities, degree to which you are satisfied (ADV)*</td>
<td>3.78</td>
<td>1.098</td>
<td>531</td>
</tr>
<tr>
<td>Time available for scholarly work, degree to which you are satisfied (TIMES)*</td>
<td>2.78</td>
<td>1.203</td>
<td>631</td>
</tr>
<tr>
<td>Latent variable: relational support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My colleagues value my research (CVRES)*</td>
<td>3.58</td>
<td>1.186</td>
<td>607</td>
</tr>
<tr>
<td>My colleagues value my teaching (CVTCH)*</td>
<td>3.86</td>
<td>1.097</td>
<td>599</td>
</tr>
<tr>
<td>I am satisfied with opportunities to collaborate with faculty in my primary department (COLLD)*</td>
<td>3.51</td>
<td>1.303</td>
<td>615</td>
</tr>
<tr>
<td>Dependent variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, how satisfied are you being a faculty member at Iowa State? (SAT)*</td>
<td>3.63</td>
<td>1.262</td>
<td>636</td>
</tr>
</tbody>
</table>

*aScale: 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, 5 = strongly agree.  bScale: 1 = very dissatisfied, 2 = somewhat dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = somewhat satisfied, 5 = very satisfied.*
Institutional Characteristics

When the Office of Institutional Research administered the AAUDE Faculty Satisfaction Survey at ISU in October 2008, 1,314 tenured or tenure-track faculty members were employed at the institution. Respondents to the survey \((N = 636)\) were asked to provide demographic information about their age, gender, marital and family status, and rank. A detailed description of the demographic information provided by the participants is presented in Table 4.2. The information presented in this table will be discussed in greater detail as results relate to specific hypotheses. Reflecting the population of faculty at ISU, the sample for this study had more male respondents than female respondents. Males represented 67.9\% \((n = 432)\) of the sample; females represented 32.1\% \((n = 204)\).

Table 4.2.

Demographic Characteristics of the Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td>432</td>
<td>67.9</td>
<td>204</td>
<td>32.1</td>
<td>636</td>
<td>100.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young (&lt; 36 years old)</td>
<td>43</td>
<td>10.1</td>
<td>33</td>
<td>16.3</td>
<td>76</td>
<td>12.1</td>
</tr>
<tr>
<td>Middle-aged (36–54 years old)</td>
<td>235</td>
<td>55.4</td>
<td>112</td>
<td>55.2</td>
<td>347</td>
<td>55.3</td>
</tr>
<tr>
<td>Senior (&gt; 55 years old)</td>
<td>146</td>
<td>34.4</td>
<td>58</td>
<td>28.6</td>
<td>204</td>
<td>32.5</td>
</tr>
<tr>
<td>Mean age = 48.7 ((SD = 10.21))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenured</td>
<td>329</td>
<td>76.2</td>
<td>135</td>
<td>66.2</td>
<td>464</td>
<td>73.0</td>
</tr>
<tr>
<td>Tenure-track</td>
<td>103</td>
<td>23.8</td>
<td>69</td>
<td>33.8</td>
<td>172</td>
<td>27.0</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>415</td>
<td>96.1</td>
<td>193</td>
<td>94.6</td>
<td>608</td>
<td>95.6</td>
</tr>
<tr>
<td>Part time</td>
<td>17</td>
<td>3.9</td>
<td>11</td>
<td>5.4</td>
<td>28</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Summarizing the characteristics of ISU faculty in the sample, the average age was 49 years ($SD = 10.2$). The age of respondents ranged from a low of 27 to a high of 76. The majority of respondents had already achieved tenure ($n = 464, 73.0\%$). See Table 4.3 for a comparison of the respondent sample to the tenured/tenure-eligible population.

For each variable, results are presented for all faculty and then the data are parsed by gender and in some instances, by age group. Respondents reflected all faculty ranks: 41.6\% ($n = 261$) at the rank of professor, 32.2\% ($n = 202$) at the rank of associate professor, and 26.2\% ($n = 164$) at the rank of assistant professor (see Table 4.4). The majority of respondents (95.6\%, $n = 608$) had a full-time faculty appointment. Regarding marital status, 86.5\% ($n = 532$) of the sample had a spouse or domestic partner. Additional descriptive statistics related to work/life survey items are discussed in greater detail later in this chapter.

Table 4.3

Respondent Representation of the Tenured/Tenure-Eligible Population

<table>
<thead>
<tr>
<th>Response category</th>
<th>Population %</th>
<th>AAUDE Respondents %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>28.0</td>
<td>32.1</td>
</tr>
<tr>
<td>Men</td>
<td>72.0</td>
<td>67.9</td>
</tr>
<tr>
<td>Full time</td>
<td>95.7</td>
<td>95.6</td>
</tr>
<tr>
<td>Part time</td>
<td>4.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Professor</td>
<td>43.8</td>
<td>41.6</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>31.6</td>
<td>32.2</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>24.6</td>
<td>26.2</td>
</tr>
<tr>
<td>Tenured</td>
<td>75.1</td>
<td>73.0</td>
</tr>
<tr>
<td>Tenure eligible</td>
<td>24.9</td>
<td>27.0</td>
</tr>
</tbody>
</table>
Table 4.4.

*Faculty Rank of the Sample*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Professor</td>
<td>207</td>
<td>54</td>
<td>261</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>119</td>
<td>83</td>
<td>202</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>98</td>
<td>66</td>
<td>164</td>
</tr>
<tr>
<td>Total</td>
<td>424</td>
<td>203</td>
<td>627</td>
</tr>
</tbody>
</table>

**Structural Equation Modeling of Latent Variables**

Prior to model estimation, the data were screened for normality. As discussed in chapter 3, missing cases ($n = 8, 1.2\%$) in the dependent variable, SAT, were deleted. Each variable in the measurement model was tested for skewness and kurtosis (see Table 4.5 for the results). Because the model with age (young) as the control variable had fewer than 100 cases, it was not estimated (Bollen, 1989).

The proposed SEM, presented in Chapter 3, was tested using AMOS 18.0. Principal component analysis was completed on each latent construct as a data reduction technique. Only one latent construct, dependent care policies, comprised more than one component. One component related to faculty opinions of how dependent care policies will impact Iowa State University, and the second component related to faculty opinions on how dependent care policies will impact tenure and promotion. The proposed construct comprised six indicator variables. In reviewing the principle component analysis for the latent construct, dependent care policies, the proposed model was respecified within the theoretical constraints to improve model fit. The component related to faculty opinions of how
Table 4.5.

*Normality Results for All Variables in the Model (N = 636)*

<table>
<thead>
<tr>
<th>Measured variables (variable name in parentheses)</th>
<th>Skewness</th>
<th>SE</th>
<th>Kurtosis</th>
<th>SE</th>
<th>Valid responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (1 = female)</td>
<td>0.770</td>
<td>0.097</td>
<td>-1.412</td>
<td>0.194</td>
<td>636</td>
</tr>
<tr>
<td>Age younger than 36 (1 = yes)</td>
<td>2.327</td>
<td>0.098</td>
<td>3.425</td>
<td>0.195</td>
<td>627</td>
</tr>
<tr>
<td>Age 36–54 (1 = yes)</td>
<td>-0.215</td>
<td>0.098</td>
<td>-1.960</td>
<td>0.195</td>
<td>627</td>
</tr>
<tr>
<td>Age older than 54 (1 = yes)</td>
<td>0.747</td>
<td>0.098</td>
<td>-1.446</td>
<td>0.195</td>
<td>627</td>
</tr>
<tr>
<td><strong>Latent variable: Dean/chair leadership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dean creates collegial and supportive environment (DCSE)</td>
<td>-0.302</td>
<td>0.099</td>
<td>-1.100</td>
<td>0.198</td>
<td>608</td>
</tr>
<tr>
<td>Dean helps me obtain needed resources (DRES)</td>
<td>-0.142</td>
<td>0.100</td>
<td>-0.999</td>
<td>0.200</td>
<td>594</td>
</tr>
<tr>
<td>Chair creates collegial and supportive environment (CHCSE)</td>
<td>-0.866</td>
<td>0.098</td>
<td>-0.579</td>
<td>0.196</td>
<td>619</td>
</tr>
<tr>
<td>Chair helps me obtain needed resources (CHRES)</td>
<td>-0.523</td>
<td>0.099</td>
<td>-0.844</td>
<td>0.197</td>
<td>614</td>
</tr>
<tr>
<td><strong>Latent variable: Dependent care policies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a tenure clock policy shows that Iowa State is supportive of family issues (TCSFI)</td>
<td>-1.076</td>
<td>0.099</td>
<td>1.571</td>
<td>0.198</td>
<td>610</td>
</tr>
<tr>
<td>The tenure clock policy will help Iowa State recruit faculty (TCREC)</td>
<td>-0.569</td>
<td>0.099</td>
<td>0.101</td>
<td>0.198</td>
<td>608</td>
</tr>
<tr>
<td>The part-time policy will help Iowa State retain qualified faculty members (PTRET)</td>
<td>-0.584</td>
<td>0.099</td>
<td>0.240</td>
<td>0.198</td>
<td>606</td>
</tr>
<tr>
<td><strong>Latent variable: Academic resources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of graduate students, degree to which you are satisfied (QGRAD)</td>
<td>-0.408</td>
<td>0.101</td>
<td>-0.880</td>
<td>0.202</td>
<td>583</td>
</tr>
<tr>
<td>Teaching responsibilities, degree to which you are satisfied (TEACH)</td>
<td>-1.188</td>
<td>0.099</td>
<td>0.892</td>
<td>0.197</td>
<td>613</td>
</tr>
<tr>
<td>Access to teaching assistants, degree to which you are satisfied (TA)</td>
<td>-0.069</td>
<td>0.105</td>
<td>-1.322</td>
<td>0.210</td>
<td>538</td>
</tr>
<tr>
<td>Advising responsibilities, degree to which you are satisfied (ADV)</td>
<td>-0.713</td>
<td>0.106</td>
<td>-0.244</td>
<td>0.212</td>
<td>531</td>
</tr>
<tr>
<td>Time available for scholarly work, degree to which you are satisfied (TIMES)</td>
<td>0.207</td>
<td>0.097</td>
<td>-1.058</td>
<td>0.194</td>
<td>631</td>
</tr>
</tbody>
</table>
Table 4.5. (continued)

<table>
<thead>
<tr>
<th>Latent variable: Relational support</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>My colleagues value my research (CVRES)</td>
<td>–0.608</td>
<td>0.099</td>
</tr>
<tr>
<td>My colleagues value my teaching (CVTCH)</td>
<td>–0.819</td>
<td>0.100</td>
</tr>
<tr>
<td>I am satisfied with opportunities to collaborate</td>
<td>–0.551</td>
<td>0.099</td>
</tr>
<tr>
<td>with faculty in my primary department (COLLD)</td>
<td>–0.612</td>
<td>0.198</td>
</tr>
<tr>
<td>Overall, how satisfied are you being a faculty</td>
<td>–0.703</td>
<td>0.097</td>
</tr>
<tr>
<td>member at Iowa State? (SAT)</td>
<td>–1.412</td>
<td>0.194</td>
</tr>
<tr>
<td>dependent care policies will impact Iowa State</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University was retained. The revised construct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>comprises three indicator variables, TCREC,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCSFI, and PTRET, thus providing a more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parsimonious model. The results of the principle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>component analysis for the dependent care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>policies construct are shown in Table 4.6. The</td>
<td></td>
<td></td>
</tr>
<tr>
<td>revised model is presented in Figure 4.1.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.6.

Results of the Principle Component Analysis for the Proposed Latent Construct: Dependent Care Policies

<table>
<thead>
<tr>
<th>Variables</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the tenure clock policy might hurt a faculty member's chances for</td>
<td>–.080</td>
<td>.858</td>
</tr>
<tr>
<td>tenure (TCTEN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a tenure clock policy shows that Iowa State is supportive of family</td>
<td>.726</td>
<td>–.114</td>
</tr>
<tr>
<td>issues (TCSFI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The tenure clock policy will help Iowa State recruit faculty (TCREC)</td>
<td>.808</td>
<td>–.066</td>
</tr>
<tr>
<td>Care of a family member is not a legitimate reason to grant extra time for</td>
<td>–.533</td>
<td>.046</td>
</tr>
<tr>
<td>tenure (TCLEG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using the part–time policy would hurt a faculty member's chances for</td>
<td>–.122</td>
<td>.852</td>
</tr>
<tr>
<td>tenure or promotion (PTTEN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The part-time policy will help Iowa State retain qualified faculty members</td>
<td>.804</td>
<td>–.121</td>
</tr>
</tbody>
</table>
Figure 4.1. Revised hypothesized causal model measuring faculty job satisfaction.
The proposed hypothesized causal model was tested using AMOS 18.0 to determine the extent to which the data fit the model, i.e., \( \Sigma = \Sigma(\theta) \). As discussed in chapter 3, this is determined by goodness-of-fit statistics.

Model fit for the proposed hypothesized model was evaluated using three fit indices, chi square \( (X^2) \), comparative fit index (CFI), and the root mean square error of approximation (RMSEA). The model chi square tests that the null hypothesis, \( \Sigma = \Sigma(\theta) \), is correct and that the data fit the model perfectly (Bollen, 1989). Thus, a researcher who is testing \( \Sigma = \Sigma(\theta) \) wants to fail to reject the null hypothesis. The chi-square statistic has been subject to criticism because it is “unrealistic to expect a model to have perfect population fit” (Bollen, 1989, p. 136). Furthermore, when the sample size of the population is large, the value of chi square “may lead to rejection of the model even though differences between observed and predicted covariances are slight” (Bollen, 1989, p. 136). When the chi-square statistic is significant, the results of the hypothesized causal model may be interpreted if other fit indices, such as the CFI and the RMSEA, support the hypothesized model (Cabrera, Nora, & Castaneda, 1993). The chi-square statistic for the proposed hypothesized model for all faculty was 514.45 \( (df = 142, p \text{ value} < .001) \).

The CFI compares the hypothesized causal model to the null model, which “assumes zero population covariances among the observed variables” (Kline, 2005, p. 140). The CFI is among the most widely used model fit index in structural equation modeling (Kline, 2005). As a rule of thumb, values greater than .90 “indicate reasonably good fit of the researcher’s model” (Kline, 2005, p. 140). The CFI for the proposed hypothesized model for all faculty was .893.
The RMSEA measures the error of approximation, or “the difference between the fit of the model to the sample covariance matrix and to the population covariance matrix” (Kline, 2005, p. 138). It is considered a badness-of-fit measure in that “a value of zero indicates the best fit and higher values indicate worse fit” (Kline, 2005, p. 139). Close approximate fit is established when the RMSEA is less than or equal to .05. Values between .05 and .08 “suggest reasonable error of approximation, and RMSEA greater than or equal to 0.10 suggests poor fit” (Kline, 2005, p. 139). The RMSEA for the proposed hypothesized model for all faculty was .064.

Table 4.7 compares the goodness-of-fit indices for the proposed model and for the final hypothesized causal model tested in this study.

Table 4.7.

*Comparison of Goodness-of-Fit Indices Across Models*

<table>
<thead>
<tr>
<th>Model</th>
<th>$X^2$</th>
<th>df</th>
<th>$p$ value</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed</td>
<td>514.45</td>
<td>142</td>
<td>0.000</td>
<td>0.893</td>
<td>0.064</td>
</tr>
<tr>
<td>Final</td>
<td>339.23</td>
<td>94</td>
<td>0.000</td>
<td>0.923</td>
<td>0.064</td>
</tr>
</tbody>
</table>

As described, the proposed hypothesized causal model was respecified by trimming three indicator variables from the dependent care policies construct, thereby making the overall model more parsimonious. Covariances between indicator variables were accounted for in the dean/chair leadership and relational support constructs based on the results of the correlation matrix. The coefficients of determination ($R^2$) for the respecified model are presented in Table 4.8. Model respecification was completed within the constraints of the theoretical framework discussed in chapter 2.
Table 4.8.

Coefficients of Determination for Endogenous Variables—Respecified Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>All faculty n = 636</th>
<th>Young faculty n = 76&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Middle-aged faculty n = 347</th>
<th>Senior faculty n = 204</th>
<th>Men n = 432</th>
<th>Women n = 204</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRES</td>
<td>.176</td>
<td>.143</td>
<td>.240</td>
<td>.181</td>
<td>.142</td>
<td></td>
</tr>
<tr>
<td>DCSE</td>
<td>.307</td>
<td>.318</td>
<td>.359</td>
<td>.265</td>
<td>.357</td>
<td></td>
</tr>
<tr>
<td>CHRES</td>
<td>.476</td>
<td>.512</td>
<td>.467</td>
<td>.472</td>
<td>.535</td>
<td></td>
</tr>
<tr>
<td>CHCSE</td>
<td>.571</td>
<td>.724</td>
<td>.437</td>
<td>.557</td>
<td>.638</td>
<td></td>
</tr>
<tr>
<td>TCSFI</td>
<td>.163</td>
<td>.256</td>
<td>.059</td>
<td>.155</td>
<td>.240</td>
<td></td>
</tr>
<tr>
<td>TCREC</td>
<td>.445</td>
<td>.344</td>
<td>.889</td>
<td>.330</td>
<td>.509</td>
<td></td>
</tr>
<tr>
<td>PTRET</td>
<td>.355</td>
<td>.211</td>
<td>.937</td>
<td>.383</td>
<td>.198</td>
<td></td>
</tr>
<tr>
<td>QGRAD</td>
<td>.210</td>
<td>.215</td>
<td>.211</td>
<td>.211</td>
<td>.201</td>
<td></td>
</tr>
<tr>
<td>TEACH</td>
<td>.480</td>
<td>.478</td>
<td>.481</td>
<td>.502</td>
<td>.433</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>.327</td>
<td>.281</td>
<td>.396</td>
<td>.294</td>
<td>.403</td>
<td></td>
</tr>
<tr>
<td>ADV</td>
<td>.279</td>
<td>.274</td>
<td>.230</td>
<td>.325</td>
<td>.191</td>
<td></td>
</tr>
<tr>
<td>TIMES</td>
<td>.288</td>
<td>.226</td>
<td>.329</td>
<td>.293</td>
<td>.288</td>
<td></td>
</tr>
<tr>
<td>COLLD</td>
<td>.451</td>
<td>.426</td>
<td>.509</td>
<td>.396</td>
<td>.580</td>
<td></td>
</tr>
<tr>
<td>CVTCH</td>
<td>.401</td>
<td>.405</td>
<td>.401</td>
<td>.454</td>
<td>.338</td>
<td></td>
</tr>
<tr>
<td>CVRES</td>
<td>.476</td>
<td>.506</td>
<td>.500</td>
<td>.448</td>
<td>.590</td>
<td></td>
</tr>
<tr>
<td>ACAD RES</td>
<td>.654</td>
<td>.683</td>
<td>.741</td>
<td>.633</td>
<td>.713</td>
<td></td>
</tr>
<tr>
<td>RELATNL SUPP</td>
<td>.697</td>
<td>.734</td>
<td>.641</td>
<td>.711</td>
<td>.657</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Sample size too small for SEM estimation.
The revised hypothesized causal model was tested using AMOS 18.0 to determine the extent to which the data fit the model, i.e., \( \Sigma = \Sigma(\theta) \). The revised model comprised 16 observed variables related to dean/chair leadership, dependent care policies, academic resources, relational support, and job satisfaction. The chi-square statistic for this final model was 339.23 \((df = 94, p \text{ value} < .001)\). The CFI was 0.923 and the RMSEA was 0.064, which indicate moderate to good fit and support the hypothesis that the data fit the hypothesized model, i.e., \( \Sigma = \Sigma(\theta) \).

Goodness-of-fit statistics “do not indicate whether the results are theoretically meaningful” (Kline, 2005, p. 134). Therefore, in the remaining section of this chapter, descriptive statistics and parameter estimates from the multivariate analysis are discussed to answer the 16 proposed hypotheses.

**Analysis of Hypotheses**

For hypotheses 1 through 8 the final hypothesized causal model was tested using all faculty data and then the data were parsed to measure the standardized parameter estimates controlling for stages in life. Hagedorn (2000) found that differences in job satisfaction among faculty exist depending on a change in life stage. Data were parsed based on the age of the faculty and three stages of life, young faculty, middle-aged faculty, and senior faculty (Hagedorn, 2000). The final hypothesized causal model was tested on these subsamples to determine if differences exist in how faculty construct job satisfaction based on life stage. Results of the subsample young faculty \((n = 76)\), defined as 35 years of age or younger, are unavailable due to the small sample size. Bollen (1989) indicated that sample sizes of at least 200 are needed in order to conduct reliable statistical analyses using SEM.
For hypotheses 9 through 16, the data were parsed by gender to determine if differences exist in how men and women faculty construct job satisfaction. Standardized results are presented based on the subsample analyzed.

Gamma (γ) coefficients are given for paths leading from exogenous to endogenous variables, and lambda (λ) coefficients are given for paths leading from one endogenous variable to another (Bollen, 1989). Statistically, significant path coefficients are noted when the p value is given in parentheses.

The standardized parameter estimates resulting in hypotheses 1 through 8 test the extent to which faculty members at ISU are satisfied with their job in light of their perceptions of institutional characteristics, defined by the combination of the latent constructs dean/chair leadership, dependent care policies, and internal support, defined by the combination of latent constructs academic resources and relational support. See Table 4.9 for the standardized parameter estimates for hypotheses 1 through 8. See Table 4.10 for the unstandardized parameter estimates for hypotheses 1 through 8.

**Hypothesis 1**

H1: The perception of academic resources available at the institution to faculty will be positively related to ratings of job satisfaction.

**All faculty.** This hypothesis is supported by the data (λ = .572). As the satisfaction in academic resources available to faculty increases, overall faculty job satisfaction increases.

**Middle-aged faculty.** This hypothesis is supported by the data (λ = .617). As the satisfaction in academic resources available to faculty increases, overall faculty job satisfaction increases.
Senior faculty. This hypothesis is supported by the data ($\lambda = .522$). As the satisfaction in academic resources available to faculty increases, overall faculty job satisfaction increases.

Table 4.9.

*Standardized Effects on Job Satisfaction—Respecified Model, Hypotheses 1–8*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>All faculty ($n = 636$)</th>
<th>Young faculty ($n = 76$)</th>
<th>Middle-aged faculty ($n = 347$)</th>
<th>Senior faculty ($n = 204$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. Academic resources on satisfaction</td>
<td>0.572</td>
<td>0.617</td>
<td>0.522</td>
<td></td>
</tr>
<tr>
<td>H2. Relational support on satisfaction</td>
<td>0.138</td>
<td>0.047</td>
<td>0.250</td>
<td></td>
</tr>
<tr>
<td>H3. Dean/chair leadership on satisfaction</td>
<td>-0.074</td>
<td>0.077</td>
<td>-0.213</td>
<td></td>
</tr>
<tr>
<td>H4. Dean/chair leadership on academic resources</td>
<td>0.681</td>
<td>0.597</td>
<td>0.826</td>
<td></td>
</tr>
<tr>
<td>H5. Dean/chair leadership on relational support</td>
<td>0.774***</td>
<td>0.736***</td>
<td>0.783***</td>
<td></td>
</tr>
<tr>
<td>H6. Dependent care policies on satisfaction</td>
<td>-0.012</td>
<td>-0.118</td>
<td>0.037</td>
<td></td>
</tr>
<tr>
<td>H7. Dependent care policies on academic resources</td>
<td>0.437</td>
<td>0.571</td>
<td>0.242</td>
<td></td>
</tr>
<tr>
<td>H8. Dependent care policies on relational support</td>
<td>0.313***</td>
<td>0.438***</td>
<td>0.167*</td>
<td></td>
</tr>
</tbody>
</table>

$X^2$ | 339.23*** | 231.81*** | 161.55***

df | 94 | 94 | 94

CFI | 0.923 | 0.924 | 0.937

RMSEA | 0.064 | 0.063 | 0.059

*aSample size too small for SEM estimation.

***p < .001.
Table 4.10.

Unstandardized Effects on Job Satisfaction—Respecified Model

<table>
<thead>
<tr>
<th></th>
<th>All faculty (n = 636)</th>
<th>Young faculty (n = 76)a</th>
<th>Middle-aged faculty (n = 347)</th>
<th>Senior faculty (n = 204)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
<td>β</td>
<td>SE</td>
</tr>
<tr>
<td>Academic resources on satisfaction</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Relational support on satisfaction</td>
<td>0.209</td>
<td>0.183</td>
<td>0.068</td>
<td>0.255</td>
</tr>
<tr>
<td>Dean/chair leadership on satisfaction</td>
<td>−0.189</td>
<td>0.286</td>
<td>0.208</td>
<td>0.408</td>
</tr>
<tr>
<td>Dean/chair leadership on academic resources</td>
<td>1.000</td>
<td>—</td>
<td>1.000</td>
<td>—</td>
</tr>
<tr>
<td>Dean/chair leadership on relational support</td>
<td>1.314***</td>
<td>0.126</td>
<td>1.384***</td>
<td>0.181</td>
</tr>
<tr>
<td>Dependent care policies on satisfaction</td>
<td>−0.050</td>
<td>0.252</td>
<td>−0.336</td>
<td>0.311</td>
</tr>
<tr>
<td>Dependent care policies on academic resources</td>
<td>1.000</td>
<td>—</td>
<td>1.000</td>
<td>—</td>
</tr>
<tr>
<td>Dependent care policies on relational support</td>
<td>0.827***</td>
<td>0.156</td>
<td>0.863***</td>
<td>0.168</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>339.23***</td>
<td>—</td>
<td>231.81***</td>
<td>—</td>
</tr>
<tr>
<td>df</td>
<td>94</td>
<td>—</td>
<td>94</td>
<td>—</td>
</tr>
<tr>
<td>CFI</td>
<td>0.923</td>
<td>—</td>
<td>0.937</td>
<td>—</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.064</td>
<td>—</td>
<td>0.059</td>
<td>—</td>
</tr>
</tbody>
</table>

*aSample size too small for SEM estimation.

***$p < .001$. 
Hypothesis 2

H₂: The perception of relational support available at the institution to faculty will be positively related to ratings of job satisfaction.

All faculty. This hypothesis is supported by the data ($\lambda = .138$). As the satisfaction in relational support available to faculty increases, overall faculty job satisfaction increases.

Middle-aged faculty. This hypothesis is supported by the data ($\lambda = .047$). As the satisfaction in relational support available to faculty increases, overall faculty job satisfaction increases.

Senior faculty. This hypothesis is supported by the data ($\lambda = .250$). As the satisfaction in relational support available to faculty increases, overall faculty job satisfaction increases.

Hypothesis 3

H₃: The perception of dean/chair leadership by faculty will be positively related to ratings of job satisfaction.

All faculty. This hypothesis is not supported by the data ($\gamma = -.074$). As satisfaction with the leadership provided by one’s dean and chair increases, overall job satisfaction decreases.

Middle-aged faculty. This hypothesis is supported by the data ($\gamma = .077$). As satisfaction with the leadership provided by one’s dean and chair increases, overall job satisfaction increases.

Senior faculty. This hypothesis is not supported by the data ($\gamma = -.213$). As satisfaction with the leadership provided by one’s dean and chair increases, overall job satisfaction decreases.
**Hypothesis 4**

H₄: The perception of dean/chair leadership by faculty will be positively related to academic resources.

**All faculty.** This hypothesis is supported by the data (γ = .681). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of academic resources also increases.

**Middle-aged faculty.** This hypothesis is supported by the data (γ = .597). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of academic resources also increases.

**Senior faculty.** This hypothesis is supported by the data (γ = .826). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of academic resources also increases.

**Hypothesis 5**

H₅: The perception of dean/chair leadership by faculty will be positively related to relational support.

**All faculty.** This hypothesis is supported by the data (γ = .774, p value < .001). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of relational support increases.

**Middle-aged faculty.** This hypothesis is supported by the data (γ = .736, p value < .001). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of relational support increases.
Senior faculty. This hypothesis is supported by the data ($\gamma = .783$, $p$ value < .001). As satisfaction with the leadership provided by one’s dean and chair increases, satisfaction with the availability of relational support increases.

Hypothesis 6

$H_6$: The perception of institutional dependent care policies for faculty will be positively related to ratings of job satisfaction.

All faculty. This hypothesis is not supported by the data ($\gamma = -.012$). As satisfaction with the dependent care policies available at ISU increases, overall job satisfaction decreases.

Middle-aged faculty. This hypothesis is not supported by the data ($\gamma = -.118$). As satisfaction with the dependent care policies available at ISU increases, overall job satisfaction decreases.

Senior faculty. This hypothesis is supported by the data ($\gamma = .037$). As satisfaction with the dependent care policies available at ISU increases, overall job satisfaction increases.

Hypothesis 7

$H_7$: The perception of institutional dependent care policies for faculty will be positively related to the availability of academic resources.

All faculty. This hypothesis is supported by the data ($\gamma = .437$). As satisfaction with the dependent care policies available at ISU increases, satisfaction with the availability of academic resources increases.

Middle-aged faculty. This hypothesis is supported by the data ($\gamma = .571$). As satisfaction with the dependent care policies available at ISU increases, satisfaction with the availability of academic resources increases.
**Senior faculty.** This hypothesis is supported by the data ($\gamma = .242$). As satisfaction with the dependent care policies available at ISU increases, satisfaction with the availability of academic resources increases.

**Hypothesis 8**

H$_8$: The perception of institutional dependent care policies available at the institution to faculty will be positively related to relational support.

**All faculty.** This hypothesis is supported by the data ($\gamma = .313$, $p$ value < .001). As satisfaction with ISU’s dependent care policies increases, satisfaction with the availability of relational support increases.

**Middle-aged faculty.** This hypothesis is supported by the data ($\gamma = .438$, $p$ value < .001). As satisfaction with ISU’s dependent care policies increases, satisfaction with the availability of relational support increases.

**Senior faculty.** This hypothesis is supported by the data ($\gamma = .167$, $p$ value < .05). As satisfaction with ISU’s dependent care policies increases, satisfaction with the availability of relational support increases.

**Hypotheses 1 through 8**

Two of the eight pathways in the hypothesized causal model were found to be statistically significant across all samples (i.e., all faculty, middle-aged faculty, and senior faculty). The statistically significant pathways, hypotheses 5 and 8, related to the impact of dean/Chair leadership and dependent care policies on relational support, or the impact of institutional characteristics on the creation and maintenance of institutional culture. As discussed in chapter 2, Tierney (1988) indicated that socialization contributes to institutional culture. Tierney further stated that deans and chairs strongly influence cultural values and
norms. The hypothesized causal model tested in this study supports Tierney’s theory across life stages. The parameter estimates indicate a strong (Urdan, 2005) and positive relationship between dean/chair leadership and relational support with coefficients greater than 0.70. Dependent care policies, as a construct, represent the element of strategy in the creation and maintenance of institutional characteristics (Tierney, 1988). The data indicate that faculty opinions on institutional policy (i.e., policies related to tenure clock stop and part-time appointments) have a moderate (Urdan, 2005) and statistically significant effect on faculty satisfaction with the collegial nature of their work environment. The data support this for the sample of all faculty and for the subsample of middle-aged faculty. When the data were parsed by senior faculty, or those ages 55 or older, the relationship was weak (Urdan, 2005) but still significant. Faculty at more advanced life stages are not as likely to have dependent children and elder care responsibilities as are their middle-aged faculty colleagues.

The parameter estimates indicated a strong (Urdan, 2005) relationship existed between academic resources and satisfaction, with correlation coefficients greater than .50 across all samples. The indicator variables comprising the academic resources construct measure satisfaction with workload and the support available in managing one’s workload. The results are consistent with previous published research (Johnsrud & Rosser, 2002) that has indicated the impact of workload on job satisfaction.

The impact of dean/chair leadership on academic resources also indicated a strong (Urdan, 2005) and positive relationship across all samples ($r > .50$). As highlighted in chapter 2, this relationship has been well documented in research related to faculty satisfaction (August & Waltman, 2004; Hagedorn, 1996). When controlling for life stage, dean/chair leadership on academic resources had the strongest impact on overall job
satisfaction for senior faculty \( r = .826 \). Given that 99\% \( n = 202 \) of the faculty in this subsample already had achieved tenure and 78.4\% \( n = 160 \) were appointed as full professors, it is likely that senior faculty experience greater satisfaction with academic resources having achieved these two career benchmarks.

Perhaps the most revealing results from the model come from the effect of dependent care policies on satisfaction with academic resources. Remember, academic resources as a construct measures faculty satisfaction with workload and their perceived ability to manage their workload. And dependent care policies, as a construct, measures faculty satisfaction with institutional policies related to tenure clock stop and part-time appointments. This same construct, as an example of an institutional characteristic, represents how policy(s) influence the organizational environment and culture. The parameter estimates indicate a strong (Urdan, 2005) positive relationship exists between this institutional characteristic and satisfaction with workload for all faculty \( \gamma = .437 \) and middle-aged faculty \( \gamma = .571 \). Of the latter group, 55\% of the subsample indicated that childcare had been either somewhat or very stressful during the 12 months preceding participation in the survey. This is compared to 23.3\% of senior faculty; the standardized coefficient \( \gamma = .242 \) for this group indicated a weak (Urdan, 2005) but positive relationship.

In summary, the strongest direct effect on job satisfaction was academic resources. Consistent with the theoretical framework discussed in chapter 2, academic leadership provided by the dean and the chair has strong (Urdan, 2005) effects on the internal support available to faculty. Pathways leading to relational support, representing faculty perceptions of the collegial nature of their work environment were the only statistically significant pathways in the model.
The data were parsed by gender and the model fit statistics indicated good fit for male faculty, i.e., $\Sigma = \Sigma(\theta)$, and good to moderate fit for female faculty. The parameter estimates for each pathway is given by subsample (see Table 4.8 for the results).

**Hypotheses 9 through 16**

Table 4.11 shows the standardized parameter estimates for hypotheses 9 through 16. See Table 4.12 for the unstandardized parameter estimates for hypotheses 9 through 16.

Table 4.11.

*Standardized Effects on Job Satisfaction—Respecified Model, Hypotheses 9–16*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Men ($n = 432$)</th>
<th>Women ($n = 204$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H_9. Dean/chair leadership on satisfaction</td>
<td>$-0.101$</td>
<td>$0.027$</td>
</tr>
<tr>
<td>H_10. Dependent care policies on satisfaction</td>
<td>$0.026$</td>
<td>$-0.247^*$</td>
</tr>
<tr>
<td>H_11. Academic resources on satisfaction</td>
<td>$0.568$</td>
<td>$0.591$</td>
</tr>
<tr>
<td>H_12. Relational support on satisfaction</td>
<td>$0.108$</td>
<td>$0.247$</td>
</tr>
<tr>
<td>H_13. Dean/chair leadership on academic resources</td>
<td>$0.679$</td>
<td>$0.632$</td>
</tr>
<tr>
<td>H_14. Dependent care policies on relational support</td>
<td>$0.300^{***}$</td>
<td>$0.383^{***}$</td>
</tr>
<tr>
<td>H_15. Dean/chair leadership on relational support</td>
<td>$0.788^{***}$</td>
<td>$0.715^{***}$</td>
</tr>
<tr>
<td>H_16. Dependent care policies on academic resources</td>
<td>$0.414$</td>
<td>$0.561$</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>$236.94^{***}$</td>
<td>$191.62^{***}$</td>
</tr>
<tr>
<td>Df</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>CFI</td>
<td>0.931</td>
<td>0.91</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.059</td>
<td>0.072</td>
</tr>
</tbody>
</table>

$^{***}p < .001$. 
Table 4.12.

Unstandardized Effects on Job Satisfaction—Respecified Model, Hypotheses 9–16

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Men ((n = 432))</th>
<th>Women ((n = 204))</th>
</tr>
</thead>
<tbody>
<tr>
<td>β</td>
<td>SE</td>
<td>β</td>
</tr>
<tr>
<td>H9. Dean/chair leadership on satisfaction</td>
<td>-0.262 0.385</td>
<td>0.071 0.418</td>
</tr>
<tr>
<td>H10. Dependent care policies on satisfaction</td>
<td>0.109 0.347</td>
<td>-0.745* 0.320</td>
</tr>
<tr>
<td>H11. Academic resources on satisfaction</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>H12. Relational support on satisfaction</td>
<td>0.182 0.271</td>
<td>0.299 0.214</td>
</tr>
<tr>
<td>H13. Dean/chair leadership on academic resources</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>H14. Dependent care policies on relational support</td>
<td>0.757*** 0.196</td>
<td>0.953*** 0.231</td>
</tr>
<tr>
<td>H15. Dean/chair leadership on relational support</td>
<td>1.215*** 0.149</td>
<td>1.579*** 0.251</td>
</tr>
<tr>
<td>H16. Dependent care policies on academic resources</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>(\chi^2)</td>
<td>236.94***</td>
<td>191.62***</td>
</tr>
<tr>
<td>(df)</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>CFI</td>
<td>0.931</td>
<td>0.91</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.059</td>
<td>0.072</td>
</tr>
</tbody>
</table>

***p <.001.

H9: The path coefficients between the perception of dean/chair leadership and job satisfaction will be smaller for female faculty than for male faculty. This hypothesis is supported by the data \((\gamma^\text{Men} = -.101; \gamma^\text{Women} = .027)\). The effect of dean/chair leadership on job satisfaction is smaller for female faculty than for male faculty.

H10: The path coefficients between the perception of institutional dependent care policies for faculty and job satisfaction will be larger for female faculty than for male faculty. This hypothesis is supported by the data \((\gamma^\text{Men} = .026; \gamma^\text{Women} = -.247, p \text{ value} < .05)\). The
effect of institutional dependent care policies is larger for female faculty than for male faculty.

H₁₁: The path coefficients between the perception of academic resources available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty. This hypothesis is not supported by the data ($\gamma^\text{Men} = .568; \gamma^\text{Women} = .591$). The effect of academic resources available at the institution on job satisfaction is larger for female faculty than for male faculty. However, the difference in the effect, .023, is negligible.

H₁₂: The path coefficients between the perception of relational support available at the institution to faculty and job satisfaction will be larger for female faculty than for male faculty. This hypothesis is supported by the data ($\lambda^\text{Men} = .108; \lambda^\text{Women} = .247$). The effect of relational support available at the institution to faculty and job satisfaction is larger for female faculty than for male faculty.

H₁₃: The path coefficients between perceptions of dean/chair leadership and the availability of academic resources will be smaller for female faculty than for male faculty. This hypothesis is supported by the data ($\gamma^\text{Men} = .679; \gamma^\text{Women} = .632$). The effect of dean/chair leadership on a faculty member’s satisfaction with the availability of academic resources is smaller for female faculty than for male faculty. The difference in this effect is small, .047.

H₁₄: The path coefficients between perceptions of institutional dependent care policies and relational support will be larger for female faculty than for male faculty. This hypothesis is supported by the data ($\gamma^\text{Men} = .300, p \text{ value} < .001; \gamma^\text{Women} = .383, p \text{ value} < .001$). Although the pathway was statistically significant, the difference in the coefficients is small, .083).
H15: The path coefficients between perceptions of dean/chair leadership and the availability of relational support will be larger for female faculty than for male faculty. This hypothesis is not supported by the data ($\gamma^{\text{Men}} = .788$, $p$ value < .001; $\gamma^{\text{Women}} = .715$, $p$ value < .001). Although the pathway is statistically significant, the difference in the coefficients is small, .073.

H16: The path coefficients between perceptions of institutional dependent care policies and the availability of academic resources will be larger for female faculty than for male faculty. This hypothesis is supported by the data ($\gamma^{\text{Men}} = .414$; $\gamma^{\text{Women}} = .561$). The effect of dependent care policies on faculty satisfaction with the availability of academic resources is larger for female faculty than for male faculty.

The strongest unstandardized effects for both male and female faculty determined by the final hypothesized causal model was the effect of dean/chair leadership on relational support ($\gamma^{\text{Men}} = 1.215$, $p$ value < .001; $\gamma^{\text{Women}} = 1.579$, $p$ value < .001) and dependent care policies on relational support ($\gamma^{\text{Men}} = .757$, $p$ value < .001; $\gamma^{\text{Women}} = .953$, $p$ value < .001). Although the data did not support the hypothesis that the effect of dean/chair leadership on relational support would be larger for females than for males, it did confirm the hypothesis that the effect of dean/chair leadership on academic resources would be larger for males than for females. Regardless, the strong (Urdan, 2005) and positive correlation between each of these paths is of interest. Consistent with published research (August & Waltman, 2004; Hagedorn, 1996; Hollenshead et al., 2005), institutional leaders such as the college dean and the department chair influence the values, norms, and extent of collegiality present in the work environment. For both genders, the effect was statistically significant. Deans and chairs also control the allocation of financial rewards (such as access to teaching assistants),
determine advising and course teaching loads, and oversee admission of graduate students. The power and influence they have in determining who, among their faculty, has access to academic support mechanisms is notable. This point is emphasized by the strength of the relationship between dean/chair leadership and academic resources, as indicated by the tested causal model.

It was hypothesized that the effect of academic resources on satisfaction would be higher for male faculty than for female faculty ($\lambda^{\text{Men}} = .568; \lambda^{\text{Women}} = .591$). The data did not support this hypothesis. It is important to note the strong (Urdan, 2005) positive correlation between these two factors ($r > .50$) for both male and female faculty. Ward and Wolf-Wendel (2004) and Finkel et al. (1994) discussed the pressure faculty, who were primarily women, experienced when they were trying to raise children while simultaneously pursuing tenure. The academic resources construct comprises variables related to workload that are critical resources as faculty are seeking promotion and tenure. Of the subsample of female faculty, 73.3% ($n = 145$) are assistant or associate professors. Clearly, academic resources are of great importance to this group and its relationship to satisfaction is understandable. The effect of dependent care policies on academic resources has a strong (Urdan, 2005) positive relationship for both male and female faculty members. Over half of the female faculty (57.7%, $n = 71$) indicated that during the 12 months preceding participation in the survey, childcare had been a somewhat or very stressful aspect of their life outside the institution compared to 43.7% ($n = 135$) of male faculty. It is likely that female faculty perceive dependent care policies as a mechanism of support that enables them to manage their workload as a faculty member. Consistent with national trends on faculty with families, 84.3% of male respondents have at least one dependent compared to 62.7% of female
respondents. In comparing marital status, 7.7% of male respondents are not married while 25.6% of female respondents are not married. See Table 4.13 for the number of faculty with families. Sex differences in the distribution of family responsibilities are present. Dependent care policies serve as one avenue through which women faculty can more readily pursue dual roles as caregivers and scholars.

Table 4.13.

Descriptive Statistics Related to Faculty with Families

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Total number of children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>65</td>
<td>15.7</td>
<td>73</td>
</tr>
<tr>
<td>1</td>
<td>64</td>
<td>15.5</td>
<td>44</td>
</tr>
<tr>
<td>2</td>
<td>173</td>
<td>41.9</td>
<td>60</td>
</tr>
<tr>
<td>3 or more</td>
<td>111</td>
<td>26.9</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>413</td>
<td>196</td>
<td>609</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/domestic partner</td>
<td>384</td>
<td>92.3</td>
<td>148</td>
</tr>
<tr>
<td>Not married</td>
<td>32</td>
<td>7.7</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>416</td>
<td>199</td>
<td>615</td>
</tr>
</tbody>
</table>

For both male and female faculty, the pathway from dependent care policies to relational support was statistically significant and indicated a moderate (Urdan, 2005) and positive relationship between the two factors ($\gamma^{\text{Men}} = .300$, $p$ value <.001; $\gamma^{\text{Women}} = .383$, $p$ value <.001). As discussed earlier, the dependent care policies construct represents the effect of an institutional characteristic on internal support; more specifically, faculty perceptions of the tenure clock stop and part-time appointments has a moderate and positive effect on
satisfaction with the collegial nature of their work environment. As hypothesized, this effect is stronger for female faculty than for male faculty.

One last pathway was found to be statistically significant for women faculty only. Dependent care policies was found to have a moderate (Urdan, 2005) but negative effect on overall job satisfaction \( \gamma^\text{Women} = -0.247, p \text{ value } < .05 \). As was discussed in the literature review, despite the growing presence of dependent care policies at research universities, women are hesitant to utilize these policies due to suspicions that accepting such accommodations will hurt their career advancement prospects or signal a diminishing academic commitment (Armenti, 2004; Finkel et al., 1994; Mason & Goulden, 2004; Ward & Wolf-Wendel, 2004; Wolf-Wendel & Ward, 2003). More female faculty (39.5%, \( n = 79 \)) than male faculty (30.4%, \( n = 125 \)) believe that using the tenure clock stop policy would hurt a faculty member’s chances for tenure. This reluctance can be indicative of problems not with individuals but with the climate and culture of academic departments and institutions (Mason & Goulden, 2004; Meyerson et al., 2008; Wolf-Wendel & Ward, 2003).

The findings from the data analyses in this study provide valuable information on how faculty at ISU construct job satisfaction. The results provide insights suggesting that differences exist between men and women in their experience as faculty members, from workload to access to resources that support academic research and perceptions of the collegial nature of their workplace. This study is one of few that measured the impact of dependent care policies on faculty members’ global job satisfaction. In the next chapter, the results are presented within the context of gendered organizational practices.
CHAPTER 5
DISCUSSION

Summary of the Study

The purpose of this study was to test an empirical model to determine the factors that contribute to overall job satisfaction among tenured and tenure-track faculty at a large public land-grant university in the Midwest and to investigate differences between men and women.

Schuster and Finklestein (2006) posited that in an ideal world, institutions of higher education “would be able to address faculty attitudes and perceptions of their work systematically . . . from a conceptual perspective” (p. 126) that includes an investigation of faculty attitudes of the changing nature of their work environment, of which dependent care policies is one example. Although faculty job satisfaction has been a widely researched topic (e.g., August & Waltman, 2004; Hagedorn, 1996; Johnsrud & Rosser, 2002; Near & Sorcinelli, 1986; Rosser, 2004; Schuster & Finklestein, 2006), few if any studies have measured the impact of dependent care policies on faculty members’ global job satisfaction. As more institutions of higher education adopt dependent care policies for faculty members, the potential impacts of these policies on job satisfaction should be explored. Findings from this study will inform educators and policy makers who are interested in factors that contribute to overall job satisfaction for female and male faculty members.

Review of the Study

In chapter 1, the purpose and the problem that drove this research and the research questions were identified. Chapter 2 provided a review of relevant literature that contained four topical subsections: faculty job satisfaction, faculty members as caregivers, tenure, and dependent care policies in academe. Studies associated with faculty job satisfaction are well
documented in higher education research. The most frequent predictors of faculty job satisfaction include perceptions of collegiality, leadership provided by a faculty member’s dean and/or chair, interactions with students, academic resources and support provided by the institution, and nonwork conditions. Acknowledging the steady decline in faculty job satisfaction (Schuster & Finklestein, 2006), this study sought to integrate all of these predictors into a causal model that has yet to be reflected in the scholarly research.

Previous studies have indicated that academic workplaces that do not acknowledge the multidimensional lives of faculty constitute an unsupportive and unwelcoming environment, especially for women faculty who undertake both an academic career and motherhood (Lester & Sallee, 2009). Women faculty members’ formations of family and care of dependents correlate strongly, albeit negatively, with academic career success (Perna, 2005b). Examples of modifications to the traditional tenure process were presented. Finally, dependent care policies, beyond the federally mandated FMLA of 1993, may serve as examples of progressive accommodations for the reasonably high proportions of women faculty members who serve as primary caregivers.

In the final section of chapter 2, the theoretical framework informing the causal model was presented. The theoretical framework included two primary topics: theory related to institutions of higher education as gendered organizations and theory related to how institutions of higher education establish institutional characteristics.

In chapter 3, the hypothesized model was presented along with an explanation of structural equation modeling, the data analysis method used in this study. In addition, a detailed description of the survey instrument and data collection procedures was provided along with an overview of the site and the study’s participants. The 16 hypotheses being
tested in the causal model were presented as well as a description of the measurement model and the variables included in the model. The chapter concluded with a discussion of reliability and validity issues and limitations of the study.

In chapter 4, the results of the data analysis were presented and each hypothesis was answered in light of the results. In this final chapter, chapter 5, the research questions are discussed in more detail and situate the results within theoretical and research implications. The chapter concludes with suggestions for future research and implications for practice.

**Discussion of the Results**

This discussion is divided into two subsections wherein the results as they relate to the exogenous variables representing institutional characteristics and the endogenous variables representing internal support and their effects on faculty job satisfaction are summarized. In the first subsection, the exogenous constructs of dean/chair leadership and dependent care policies are reviewed and how each contributes to global job satisfaction is examined. In the second subsection, the endogenous constructs of academic resources and relational support are reviewed and how each contributes to global job satisfaction is examined.

**Exogenous Constructs**

**Dean/chair leadership.** Previous research has shown an inextricable link between faculty perceptions of institutional leadership and overall job satisfaction (August & Waltman, 2004; Hagedorn, 1996). Those who serve as deans of colleges and chairs of departments are perceived to have significant influence in shaping institutional policy, affecting workplace dynamics (i.e., the extent to which a collegial nature is present in the workplace), and determining who has access to support mechanisms (i.e., access to TAs,
advising loads, teaching loads) that allow individual faculty members to better manage their workloads. In this section is an explanation of how the results of this study either contribute to or refute prior research.

In this study it was hypothesized that dean/chair leadership would have a positive correlation with overall job satisfaction (H4). In reviewing the results, the parameter estimate of all faculty and of senior faculty indicate a negative correlation, –.074 and –.213, respectively. Neither of these parameter estimates was found to be statistically significant in the overall causal model. The results for middle-aged faculty indicated a weak but positive correlation, .077.

For all faculty and for senior faculty, it is important to note the negative effect for all faculty was quite small, –.074. However, the results for senior faculty indicate that, as their perceptions of the leadership provided by their dean and department chair increased in satisfaction, their overall job satisfaction decreases. This indicates a weak to moderate (Urdan, 2005) negative relationship. Thus, senior faculty, the majority of whom have achieved tenure, rely less upon institutional leadership to shape their overall satisfaction. Having earned tenure, senior faculty experience greater levels of academic freedom and autonomy.

In reviewing the results for male and female faculty (H9), the results of this study indicate that dean/chair leadership has a greater impact on job satisfaction for male faculty than for female faculty. It is important to note that the parameter estimates for each subsample indicate a weak correlation between the two variables (dean/chair leadership and satisfaction), –.101 for males and .027 for females. Inferences are not drawn on these results
due to the weak relationship between the two variables. Neither of these paths was considered statistically significant in the causal model.

Overall, the results are unique in that the direct effect of dean/chair leadership on global job satisfaction for faculty was shown to be weak, with parameter estimates ranging from .027 to –.213. This conclusion is important because prior research often highlighted this relationship as one that is especially significant. It is important to review the parameter estimates for the paths between dean/chair leadership and academic resources and relational support given that these are the impacts most widely discussed in the literature. Previous researchers have discussed the blanket impact of administrative leadership on satisfaction, which may lead some to believe that there is a direct impact. Although that may be the case for some populations, a direct impact from leadership to satisfaction was not evident in this study. This finding could be attributed to the observed variables comprising the latent exogenous construct, dean/chair leadership. The construct directly measures faculty satisfaction with the dean and chair’s ability to (a) provide the necessary resources that will enable their success and (b) create a collegial and supportive work environment. The observed variables in this construct are focused more on measuring the direct impact of academic resources and relational support.

The impact of dean/chair leadership on academic resources was shown to be very strong and denoting a positive relationship. That is, as satisfaction with the leadership provided by faculty members’ dean and chair increased, so did satisfaction with the resources available to faculty to manage their academic workload. This relationship held true for all subsamples, middle-aged and senior faculty as well as male and female faculty. Previous researchers have discussed at length the impact deans and chairs have on resource allocation.
It is true that individuals in these leadership positions determine budget allocations and make
decisions on workload assignments (i.e., committee service, teaching and advising loads).
The impact of these decisions, the decisions of deans and chairs, is quite large on faculty
satisfaction with academic resources. The findings of this study directly support previous

The impact of dean/chair leadership on relational support was found to support
previous research for all faculty and the subsamples of middle-aged and senior faculty.
However, this study hypothesized that the impact of dean/chair leadership on relational
support would be stronger for women faculty than for men faculty. The findings of this
study do not support this hypothesis. A couple of items are especially noteworthy as they
relate to the relationship between these two job satisfaction factors. First, the pathway
between dean/chair leadership and relational support was the only pathway that was
statistically significant in the causal model for all subsamples: all faculty, middle-aged
faculty, senior faculty, men, and women. Furthermore, the impact of dean/chair leadership
on relational support was strong and positive for all samples tested. In these two respects, the
findings of this study support previous research that has suggested that individuals holding
the positions of dean and chair influence the collegial nature of the faculty member’s
workplace (August & Waltman, 2004; Hagedorn, 1996; Johnsrud & Rosser, 2002; Near &
Sorcinelli, 1986). Although this study hypothesized that the impact of dean/chair leadership
on relational support would be larger for female faculty than for male faculty, the results did
not indicate a significant difference. In fact, the impact was almost equal between the two
groups.
Dependent care policies. To date, there is no published research quantifying the impact of institutional dependent care policies on faculty job satisfaction. Based on the published research, this study hypothesized that faculty perceptions of dependent care policies would positively correlate with job satisfaction directly and would positively impact satisfaction with managing academic workload (academic resources) and perceptions of the collegial nature of one’s workplace (relational support). Furthermore, in this study it was hypothesized that the impact of dependent care policies on all of the endogenous variables would be stronger for women faculty than for men faculty.

The findings suggest that the direct effect of dependent care policies on global job satisfaction is quite weak for all faculty and for the three subsamples of middle-aged, senior, and male faculty. This is not surprising considering very few faculty members in the sample had actually utilized the dependent care policies. Furthermore, even for those who had, the policies were still relatively new to the campus culture and their impact on overall job satisfaction had yet to be fully realized. The impact on female faculty was –.247 and was statistically significant ($p$ value < .05). For male faculty, the impact was shown to be negligible. As predicted (H10), the impact of dependent care policies on global job satisfaction is larger for female faculty members than for male faculty members. This finding is consistent with previous research and provides evidence that women faculty members tend to be disproportionately affected “by conflicts between the ideal academic career trajectory and family needs” (Hollenshead et al., 2005, p. 42). Even though many women in the study did not have dependent children themselves, the results suggest that women faculty recognize the importance of these policies. The results determined that female faculty perceived the dependent care policies at ISU as mechanisms that would help
recruit and retain faculty and signaled that those policies indicated that ISU was supportive of family issues.

Despite this favorable view of the institution’s dependent care policies, the construct had a moderate and negative correlation to global job satisfaction. Prior research has indicated that faculty members are reluctant to utilize dependent care policies due to suspicions that accepting such accommodations will hurt their career advancement prospects or signal a diminishing academic commitment (Armenti, 2004; Finkel et al., 1994; Mason & Goulden, 2004; Ward & Wolf-Wendel, 2004; Wolf-Wendel & Ward, 2003). Such reluctance can be indicative of problems, not with individuals, but with the climate and culture of academic departments and institutions (Mason & Goulden, 2004; Meyerson et al., 2008; Wolf-Wendel & Ward, 2003). This hesitation to take advantage of these policies could explain the negative correlation between dependent care policies and job satisfaction.

The direct impact of dependent care policies on academic resources was strong and positive for all faculty and subsamples with exception of senior faculty. As predicted, the impact was larger for women than for men. The goal behind dependent care policies is for faculty members, primarily women who assume the role of primary caregiver, to maintain their careers and raise their families “within the context of viable and sustained, supportive work-family structures” (Drago & Colbeck, 2003, p. 82.) Given this, it is not surprising that the impact between these two factors is so strong. As satisfaction with institutional policies increases, so does satisfaction with the academic resources available to faculty members. As the literature has indicated, dependent care policies have the power to positively impact faculty recruitment and retention efforts by making faculty workload more manageable.
The direct impact of dependent care policies on relational support was found to be statistically significant for all faculty and subsamples. As predicted, the results of the analysis indicate a positive relationship between these two job satisfaction factors. For all faculty and subsamples, with exception of senior faculty, the correlation between dependent care policies and relational support was moderate to strong. The relationship between these two factors for senior faculty was weak, which is not surprising. Senior faculty members, at this later life stage, are more likely to have grown children or dependent children who no longer require daycare and instead are attending primary or secondary school while the faculty member is at work. For all faculty members, middle-aged faculty members, men, and women, perceptions of dependent care policies did have a statistically significant and positive impact on perceptions of the collegial nature of their workplace. These findings lend credence to the claim that dependent care policies positively influence the organizational environment and culture. By recognizing issues faced by faculty who are caregivers for dependents, institutions of higher education can enhance the collegial nature of the academic environment by implementing dependent care policies.

**Endogenous Variables**

**Academic resources.** As predicted, and consistent with previous research (August & Waltman, 2004; Bilimoria et al., 2006; Hagedorn, 1996; Johnsrud & Rosser, 2002; Near & Sorcinelli, 1986), the impact of academic resources has a positive effect on job satisfaction. The relationship between these two satisfaction factors for all faculty and subsamples was determined to be quite strong, with parameter estimates ranging from .522 to .617. In this study it was hypothesized that, because universities, as gendered organizations, maintain structures and practices that favor and reward traditional male behaviors and work/life
structures (J. Acker, 1990; Williams, 2000), the effect of academic resources on job satisfaction would be larger for male faculty than for female faculty. The results of this study did not support this hypothesis. Previous research has determined that within academe, “women as a group, carry heavier teaching loads, bear greater responsibility for undergraduate education, and have more service commitments . . . women also have less access to graduate teaching assistants, travel funds, research monies, laboratory equipment, and release time for research” (Park, 1996, p. 55). Because of this, one would expect that the faculty experience, from workload to access to resources that support academic research, differs between men and women. It is possible that male and female faculty at ISU do have different experiences, but the results indicate that both subsamples perceive academic resources to have equal significance in determining overall job satisfaction. The results of this study indicate that, for this subsample of faculty, the difference was negligible, with a discrepancy between parameter estimates of .023. Further research, using a qualitative approach, could be valuable in addressing whether male and female faculty at ISU have different experiences and access to academic resources.

**Relational support.** As predicted, and consistent with previous research (August & Waltman, 2004; Bilimoria et al., 2006; Hagedorn, 1996; Near & Sorcinelli, 1986), the impact of relational support has a positive effect on job satisfaction. It is important that the relationship between these two satisfaction factors was weak for all faculty, middle-aged faculty, and male faculty. A moderate relationship was found to exist between these two factors for senior faculty and female faculty. The results of this study, in relation to previous research, are interesting in that, although the results do support the stated hypothesis, the impact of the collegial nature of the workplace is negligible for three of the five groups
tested. As Tierney (1988) suggested, socialization is one of the elements that defines institutional culture. Senior faculty, the majority of whom have achieved tenure, are most likely the individuals within departments and colleges to occupy positions that influence department and college policies and practices. More often than not, senior faculty members are asked to mentor, and thereby engage in the process of socializing, new and probationary faculty. Through these interactions, senior faculty members reinforce certain values and expected modes of behavior and influence cultural behaviors and norms. Given that the act of engaging in socialization is present in the traditional job duties of senior faculty, it is not surprising that relational support has a moderate impact on overall job satisfaction.

Implications for Theory and Research

This research provides an empirical response to the impact of dependent care policies on faculty job satisfaction, which, to date, has been absent from the literature. Prior research has documented the growing availability of dependent care policies and faculty members’ support of birth and infant care accommodations (Ward & Wolf-Wendel, 2005). Research universities, like ISU, are the “most likely of institutional types to have formalized” leave policies (Ward & Wolf-Wendel, 2005, p. 69). Dependent care policies, beyond the federally mandated FMLA of 1993, have been in place at ISU since 2002 (ISU, 2010). Despite this, to date no studies have attempted to quantify the impact of dependent care policies on faculty job satisfaction. Near and Sorcinelli (1986) analyzed faculty satisfaction using a combination of predictor variables related to work (e.g., interaction with colleagues and students, opportunity to pursue personal research agendas, and financial rewards such as salary) and nonwork (e.g., career opportunities for spouse, family life and childcare options, and family size) conditions. But no published literature has attempted to measure the impact
of tenure clock stop policies and part-time appointments on global job satisfaction for faculty.

Schuster and Finklestein (2006) posited that, in an ideal world, institutions of higher education “would be able to address faculty attitudes and perceptions of their work systematically . . . from a conceptual perspective” (p. 126) that includes an investigation of faculty attitudes of the changing nature of their work environment, of which dependent care policies is one example. As more institutions of higher education adopt dependent care policies for faculty members, this study provides empirical evidence of factors that contribute to overall job satisfaction among male and female faculty and faculty at various life stages.

Wolfinger, Mason, and Goulden (2008) found that “inequities persist in household labor and the relative importance placed on men’s and women’s careers [and] child-rearing obligations affect women’s struggles to achieve equality in academia” (p. 402). Although faculty work is often characterized by flexible work schedules and environment, increased workloads and expectations of productivity disproportionately impact faculty members—more often women—who are also the primary caregivers within their family units. The results of this study indicate that dependent care policies have a greater impact on women faculty members’ satisfaction with academic workload than that for men faculty members. Programs and policies that take family circumstances into account must continue to be designed in order to provide more equitable opportunities for career success.

The hypothesized and tested model in this study took a confirmatory approach in data analysis and was based heavily on the published research of Bilimoria et al. (2006). Of the 16 hypotheses tested in this study, 10 were based on the Bilimoria et al. study (see Table 5.1). This study confirmed 7 of the 10 hypotheses presented by Bilimoria et al. In
Table 5.1

*Comparison of Findings Between Bilimoria et al. (2006) and Ramirez Studies*

<table>
<thead>
<tr>
<th>Bilimoria et al. study findings</th>
<th>Ramirez study</th>
<th>Finding</th>
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</thead>
<tbody>
<tr>
<td>Academic resources positively related to SAT</td>
<td>H₁</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Relational support positively related to SAT</td>
<td>H₂</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership positively related to SAT</td>
<td>H₃</td>
<td>Not confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership positively related to academic resources</td>
<td>H₄</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership positively related to relational support</td>
<td>H₅</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership → SAT smaller for women</td>
<td>H₉</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Academic resources → SAT smaller for women</td>
<td>H₁₁</td>
<td>Not confirmed</td>
</tr>
<tr>
<td>Relational support → SAT larger for women</td>
<td>H₁₂</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership → academic resources smaller for women</td>
<td>H₁₃</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Dean/chair leadership → relational support larger for women</td>
<td>H₁₅</td>
<td>Not confirmed</td>
</tr>
</tbody>
</table>

considering the hypotheses that were not confirmed, H₃ stated that perception of dean/chair leadership by faculty will be positively related to ratings of job satisfaction. The results indicated an almost nonexistent association between the two variables. The results of the model indicated that dean/chair leadership directly impact academic resources and relational support but the direct impact on job satisfaction was not found. Hypothesis 11 stated the path coefficients between the perception of academic resources available at the institution to faculty and job satisfaction will be smaller for female faculty than for male faculty. The results indicated that academic resources have an equal impact on job satisfaction regardless of gender. Hypothesis 15 stated the path coefficients between perceptions of dean/chair leadership and the availability of relational support will be larger for female faculty than for
male faculty. The results indicated that relational support has an equal impact on job satisfaction regardless of gender.

Finally, this research determined that dependent care policies have a statistically significant effect on faculty perceptions of the collegial nature of their work environment. Being perceived as an institution that recognizes the multidimensional aspects of its employees’ lives positively affects the perception of relational support available to faculty. The perception of collegiality in the workplace does have a direct affect on overall faculty job satisfaction, so indirectly, dependent care policies do impact faculty job satisfaction.

**Future Research**

Additional studies that quantify the impact of dependent care policies on faculty job satisfaction are needed to establish trends within the field of higher education. Comparisons with other institutions are needed, especially with institutions that may have a greater variety of policies available than the tenure clock stop and part-time appointments present at ISU. And although quantitative studies like this one suggest unique findings, additional studies using qualitative research are needed for a more thorough understanding.

Despite the fact that dependent care policies have been in place at ISU for almost a decade, the survey showed that few respondents to this survey \((n = 51, 8.0\%)\) had utilized the tenure clock stop policy and the part-time appointment option and, of those who had utilized the policies, 21 were men and 30 were women. Research has indicated faculty remain reluctant to exercise their right for accommodations for fear of negative career consequences. Studies are needed to determine if there exists a negative relationship between seeking accommodations for dependent care and achieving tenure. Comparisons between the tenure
achievement rate of policy utilizers and nonutilizers could be fairly simple as long as there is institutional buy-in and transparency in the tenure process.

The hypothesized causal model tested in this study should be revised using different predictor variables to see if a more parsimonious model is available. Examples of predictor variables not incorporated in this study include the extent to which a faculty member agrees that

1. His or her department provides a good fit.
2. He or she has a voice in the decision-making that affects the direction of the department within they work.
3. He or she feels excluded from an informal network in the department within which they work.

All of these variables could comprise the relational support construct and remain consistent with the theoretical framework driving this study. Because the pathway leading from the exogenous variable, dependent care policies, to the endogenous variable, relational support, was the only pathway that was statistically significant for all samples tested, the relationship between these two job satisfaction factors ought to be explored more thoroughly.

Salary and compensation as predictors of job satisfaction were not included in the model tested in this study. It would be interesting to see how, if at all, salary and compensation affects the results. Salary and compensation could be an exogenous or an endogenous latent construct depending on the theoretical framework driving the revised study.

Rhoades (2007) suggested that more complex understandings of faculty work and institution–faculty relationships can be gained by situating studies in less prestigious sectors.
of higher education such as public comprehensive colleges and universities rather than the usual settings of research universities. Dependent care policies, although most prevalent on the campuses of research universities, are being implemented at public comprehensive colleges and universities. Studies on the impact of dependent care policies on faculty job satisfaction should be explored.

**Implications for Policy and Practice**

Institutions of higher education should continue to develop dependent care policies that allow faculty members to engage fully in their lives as academicians and caregivers. Lester and Sallee (2009) suggested institutions of higher education would be well advised to transform from an organizational setting that is characterized by a separate spheres model, in which women kept “their family responsibilities separate from their professional responsibilities,” (p. 160) to a work/life systems framework in which “workers now become central to the operation of the system. Rather than expecting employees to conform to predefined norms, the organization is expected to work with employees to create mutually beneficial practices” (p. 160). Ropers-Huilman (2000) suggested that research should “refrain from perceiving women as representative of only one part of their identities and rather should consider how those parts interact to function as a dynamic whole” (p. 28). In acknowledging the multidimensional responsibilities and significant events for faculty throughout life (i.e., tenure and promotion, adoption, illness, death of a spouse or parent), institutions can redefine their care policies to promote a more holistic understanding of faculty members’ lives. The notion that dependent care policies can be mutually beneficial to the faculty member and the institution should be embraced. As characterized by the work/
life systems model, the birth of a child is significant not only to the individual faculty member but also to the institution.

Institutions of higher education that are facing budget constraints should view dependent care policies as fiscally responsible practices. Studies have found that when workers feel unable to manage their work and caregiving responsibilities, worker productivity and quality control decreases while attrition and absenteeism increases (Elliott, 2003; Williams & Segal, 2003). This study found that dependent care policies impact satisfaction with relational support available to faculty and that this effect was not only statistically significant for all samples tested but was larger for women than for men. Therefore, university leaders, especially individuals serving as deans and department chairs, need to lead efforts that create collegial environments conducive to positive social relationships among faculty, especially women. Efforts such as this may aid institutions of higher education in the retention of female scholars (Hurtado & DeAngelo, 2009).

The findings from this study showed that dean/chair leadership impacts satisfaction with relational support available to faculty and this effect was statistically significant for all samples tested. The effect of leadership on the collegial nature of the workplace was quite large. Given this, provosts, presidents, and chancellors should collect feedback on the family friendliness of chairs and deans as part of their annual evaluations. This information, if combined with statistics on the recruitment and retention of female scholars, could be an indication of the deans’ or chairs’ commitment to fostering an environment that is fair and equitable for academics who are also primary caregivers.

In addition, prior research has found that mentoring programs, especially those focused on supporting women faculty, such as the ISU ADVANCE Scholar’s Program, are
an effective means to enhance the collegial nature of the workplace. Deans and chairs can implement mentoring programs within their schools and departments as a no-cost (or low-cost) way of encouraging collaborative relationships among faculty, increasing knowledge of research endeavors within one’s department or school, and providing opportunities for faculty to develop social and professional networks.

Many college and university campuses have designated centers or staff focused on faculty advancement initiatives such as improving teaching skills, supporting faculty pursuing Fulbright fellowships, and training chairs on the recruitment and hiring of faculty. Given the impact that chairs and deans have on influencing the collegial nature of the workplace, colleges and universities should offer with regularity workshops focused on developing and enhancing the leadership skills of its deans and chairs.

Interinstitutional collaboration and support should be explored. If institutions shared scenarios and problem-solving techniques with one another, perhaps dependent care policies would become more standardized instead of being composed of ad-hoc guidelines. The AAUP released a handbook comprising faculty and administrator questions related to FMLA. Although this handbook was not meant to provide an exhaustive response to every possible scenario, it does provide a broad scope that policy makers can reference in designing new institutional processes. Institutional leaders, faculty and administrators alike, should be more willing to engage in conversations about the dependent care policies in place at their institution and ask for constructive feedback on refining policies so they become mutually beneficial for the institution and its faculty. Academic conferences where institutional leaders of similar colleges and universities convene could likely serve as a catalyst in encouraging this exchange of information.
Conclusion

The results of this research study provided unique insight into how dependent care policies contribute to overall job satisfaction. Dependent care policies have a greater impact on female faculty members’ satisfaction with academic workload in comparison to their male counterparts. In addition, dependent care policies have a statistically significant effect on faculty perceptions of the collegial nature of their work environment. This finding supports previous research indicating that dependent care policies are becoming tools with which institutions of higher education are recruiting and retaining its faculty.

Differences were explored based on the various life stages of the faculty members in the sample as well as between genders. Because the sample in this study was so diverse (e.g., in age, appointment, tenure status, etc.), salient issues were not always present across subsamples. One effect that was consistent among subsamples was the impact of the leadership provided by deans and chairs on faculty satisfaction with academic resources. Regardless of the subsample, the findings of this study reinforced previous research indicating that deans and chairs influence faculty work resources and the perceptions faculty have in their ability to manage their workload (e.g., teaching and advising responsibilities as well as the amount of time they can devote to their personal research agenda).

The results of this study shed light on factors that contribute to job satisfaction for tenured and tenure-eligible faculty at a large, public, land-grant institution in the Midwest. This study can help guide leaders of institutions of higher education in their efforts to foster and maintain a diverse campus environment—one that recognizes the multifaceted lives of its faculty, one that is welcoming and supportive of faculty caregivers, one that promotes equality for female caregivers.
Within the last decade, research universities have written into faculty handbooks standard practices related to dependent care policies. Regional public universities and private liberal arts colleges, among other institutions of higher education, are following suit. Given the increasing responsibilities for elder care as the baby boomer generation ages and the increasing expectation within American families that men will be more active in co-parenting, dependent care policies will continue to be important avenues through which faculty manage work and home responsibilities. Just as college and universities have adapted to accommodate the needs of its commuter students by expanding online courses and have reallocated library budgets to increase access to electronic resources, institutions of higher education must be ready to modify practices and processes in order to meet the needs of its faculty. The continued adoption of dependent care policies across all institutions of higher education is needed. And university and college leaders must continue to revise and develop creative processes that allow faculty to be successful at and satisfied with their responsibilities as scholars and as caregivers.
REFERENCES


## SATISFACTION

1. Overall, how satisfied are you being a faculty member at Iowa State?

   - [ ] Very dissatisfied
   - [ ] Somewhat dissatisfied
   - [ ] Neither satisfied nor dissatisfied
   - [ ] Somewhat satisfied
   - [ ] Very satisfied

2. Specify the degree to which you are satisfied with the following types of compensation:

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
<th>Not applicable</th>
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<tr>
<td>Salary</td>
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<td>Start-up costs</td>
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3. Specify the degree to which you are satisfied with the following resources:

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<tr>
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<th>Very dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
<th>Not applicable</th>
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<td>Availability of nearby parking</td>
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<td>Office space</td>
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<td>Lab or research space</td>
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<td>Classroom space</td>
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<td>Library resources</td>
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<td>Computer resources</td>
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<td>Clerical and administrative staff</td>
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<tr>
<td>Technical and research staff</td>
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<td>Computer support staff</td>
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<td>Support for securing grants</td>
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<tr>
<td>Other resources to support research</td>
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</table>
4. Specify the degree to which you are satisfied with the following faculty responsibilities:

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<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
<th>Not applicable</th>
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<tbody>
<tr>
<td>Teaching responsibilities</td>
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<td>Access to teaching assistants</td>
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<td>Advising responsibilities</td>
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<td>Quality of graduate students</td>
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<td>Time available for scholarly work</td>
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<td>Committee and administrative</td>
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<td>responsibilities</td>
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</table>

**WORKLOAD**

5. Please indicate the extent to which each of the following aspects of work has been a source of stress for you over the past 12 months. *If you are on leave this year, please answer the question for the preceding 12 months.*

<table>
<thead>
<tr>
<th></th>
<th>Not at all stressful</th>
<th>Somewhat stressful</th>
<th>Very stressful</th>
<th>Not applicable</th>
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</thead>
<tbody>
<tr>
<td>Timing of departmental meetings and functions</td>
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<tr>
<td>Managing a research group or grant (e.g.,</td>
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<td>finances, personnel)</td>
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<tr>
<td>Securing funding for research</td>
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<td>Scholarly productivity</td>
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<tr>
<td>Teaching responsibilities</td>
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<tr>
<td>Advising responsibilities</td>
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<tr>
<td>Committee and/ or administrative responsibilities</td>
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<tr>
<td>Review/promotion process</td>
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<tr>
<td>Departmental or campus politics</td>
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</table>
6. Please answer the following questions related to teaching:

<table>
<thead>
<tr>
<th>Question</th>
<th>Please Select #</th>
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</thead>
<tbody>
<tr>
<td>How many undergraduate classes (excluding independent studies) did you teach during the last academic year?</td>
<td></td>
</tr>
<tr>
<td>How many TAs, total, did you work with in these undergraduate classes?</td>
<td></td>
</tr>
<tr>
<td>How many of these undergraduate classes were close to your research interests?</td>
<td></td>
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<tr>
<td>How many graduate-level classes (excluding independent studies) did you teach during the last academic year?</td>
<td></td>
</tr>
<tr>
<td>How many of these graduate-level classes were close to your research interests?</td>
<td></td>
</tr>
</tbody>
</table>

7. Please indicate the number of committees (formal and ad hoc) you served on within the past 12 months, excluding graduate student POS or thesis committees. If you are on leave this year, please answer the question for the preceding 12 months.

<table>
<thead>
<tr>
<th>Committee Type</th>
<th>Please Select #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental committees</td>
<td></td>
</tr>
<tr>
<td>University/College committees</td>
<td></td>
</tr>
<tr>
<td>External committees or boards related to your discipline (e.g., accreditation, editor of a journal, officer of a professional association)</td>
<td></td>
</tr>
</tbody>
</table>

**WORK ATMOSPHERE**
8. Please indicate your agreement or disagreement with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>My colleagues value my research</td>
<td></td>
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<tr>
<td>My colleagues value my teaching</td>
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<tr>
<td>I am satisfied with opportunities to collaborate with faculty in my primary department</td>
<td></td>
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<tr>
<td>I am satisfied with opportunities to collaborate with faculty in other units at Iowa State</td>
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<td></td>
</tr>
<tr>
<td>Interdisciplinary work is recognized and rewarded in my department</td>
<td></td>
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<tr>
<td>My chair creates a collegial and supportive environment</td>
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</tr>
<tr>
<td>My dean creates a collegial and supportive environment</td>
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</tr>
<tr>
<td>My chair helps me obtain the resources I need</td>
<td></td>
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</tr>
<tr>
<td>My dean helps me obtain the resources I need</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I have a voice in the decision-making that affects the direction of my department</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I can navigate the unwritten rules concerning how one is to conduct oneself as a faculty member</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>My department is a good fit for me</td>
<td></td>
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</tr>
<tr>
<td>My department is a place where individual faculty may comfortably raise personal and/or family responsibilities when scheduling department obligations</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I feel excluded from an informal network in my department</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I have to work harder than some of my colleagues to be perceived as a legitimate scholar</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**MENTORING**

9. While at Iowa State, have you served as a mentor for another faculty member?
*(Check all that apply.)*

- [ ] Yes, through a formal program
- [ ] Yes, informally
- [ ] No
10. Have you had a formal mentor within your department?
   - Yes, one was assigned to me
   - Yes, one was chosen by me
   - No, (Please skip to question 12)

11. How helpful have you found this formal mentoring?
   - Very unhelpful
   - Somewhat unhelpful
   - Neither helpful nor unhelpful
   - Somewhat helpful
   - Very helpful
   - Not applicable

12. While at Iowa State, have you had one or more informal mentors?
(Someone not officially assigned to you who gives advice on career issues and/ or advocates for you in your discipline. This could include someone outside Iowa State)
   - Yes
   - No (Please skip to question 14)

13. How helpful have you found this informal mentoring?
   - Very unhelpful
   - Somewhat unhelpful
   - Neither helpful nor unhelpful
   - Somewhat helpful
   - Very helpful
   - Not applicable

14. While at Iowa State, do you feel as though you have received adequate mentoring?
   - Yes
   - No
   - Not applicable

15. For the next section related to tenure, promotion, and advancement, please indicate your current tenure status.
   - Tenured
   - Not tenured, and tenure-eligible
   - Not tenure-eligible
### PROMOTION & TENURE

16. Do you agree that the criteria for promotion and/or tenure are clearly communicated?

- [ ] Strongly disagree
- [ ] Somewhat disagree
- [ ] Neither agree nor disagree
- [ ] Somewhat agree
- [ ] Strongly agree
- [ ] Don’t know

17. In your experience, to what extent are the following items valued in the promotion and/or tenure process?

<table>
<thead>
<tr>
<th></th>
<th>Valued slightly or not at all</th>
<th>Somewhat valued</th>
<th>Highly valued</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research/Scholarly work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Teaching contributions</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Service (i.e., committee</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>work, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension and professional practice</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

18. How appropriately are these items valued in the promotion and/or tenure process?

<table>
<thead>
<tr>
<th></th>
<th>Very undervalued</th>
<th>Somewhat undervalued</th>
<th>Valued appropriately</th>
<th>Somewhat overvalued</th>
<th>Very overvalued</th>
<th>Don’t know</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research/Scholarly work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Teaching contributions</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Service (i.e., committee</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>work, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension and professional practice</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
</tbody>
</table>

19. At any time since you started working at Iowa State, have you had your tenure clock slowed or stopped for personal reasons, including care giving for a child or parent, your own health concerns, or a family crisis?

(If you have had two extensions, check all that apply)

- [ ] Yes, within the past year
- [ ] Yes, more than a year ago but within the past five years
- [ ] Yes, more than five years ago
- [ ] No (please skip to question 21)
20. How supportive was your department concerning your having your tenure clock stopped or slowed?

- Very unsupportive
- Somewhat unsupportive
- Neither supportive nor unsupportive
- Somewhat supportive
- Very supportive
- Not applicable

21. Two Iowa State tenure flexibility policies are described below. Please indicate "Yes" if you are aware of a policy and "No" if you are not aware of a policy.

<table>
<thead>
<tr>
<th>Policy Description</th>
<th>Yes, I am aware</th>
<th>No, I am not aware</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Extension of the tenure clock: Tenure-eligible faculty dealing with significant life events (e.g., care of an infant, sick family member, personal illness) may extend, for up to one year, the period of time being considered for tenure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Part-time appointments for tenure-eligible and tenured faculty: Tenured or tenure-eligible faculty may apply to work part time with reductions in duties and salary for various reasons (e.g., balance work with professional practice, care of an infant or sick family member, personal illness).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Please indicate your level of agreement or disagreement with the following statements regarding the TENURE CLOCK policy described above:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the tenure clock policy might hurt a faculty member's chances for tenure</td>
<td></td>
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</tr>
<tr>
<td>Having a tenure clock policy shows that Iowa State is supportive of family issues</td>
<td></td>
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</tr>
<tr>
<td>Using the tenure clock policy might reflect poorly on a faculty member's job performance</td>
<td></td>
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</tr>
<tr>
<td>Additional time for tenure will not help because colleagues will look at the ratio of publication per year</td>
<td></td>
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</tr>
<tr>
<td>The tenure clock policy will help Iowa State recruit faculty</td>
<td></td>
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<td></td>
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<tr>
<td>My department already provides enough tenure flexibility to help faculty deal with personal issues</td>
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</tr>
<tr>
<td>Extra time on the tenure clock provides faculty members with an unfair advantage over peers</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Care of a family member is not a legitimate reason to grant extra time for tenure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Please indicate your level of agreement or disagreement with the following statements regarding the PART-TIME policy described above:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the part-time policy would place undue burden on colleagues</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using the part-time policy would hurt a faculty member's chances for tenure or promotion</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The part-time policy will help Iowa State retain qualified faculty members</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

PROMOTION & ADVANCEMENT

16. Do you agree that the criteria for promotion and advancement are clearly communicated?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
- Don't know

17. In your experience, to what extent are the following items valued in the promotion and advancement process?

<table>
<thead>
<tr>
<th>Item</th>
<th>Valued slightly or not at all</th>
<th>Somewhat valued</th>
<th>Highly valued</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research/Scholarly work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Teaching contributions</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Service (i.e., committee work, etc.)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Extension and professional practice</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

18. How appropriately are these items valued in the promotion and advancement process?

<table>
<thead>
<tr>
<th>Item</th>
<th>Very undervalued</th>
<th>Somewhat undervalued</th>
<th>Valued appropriately</th>
<th>Somewhat overvalued</th>
<th>Very overvalued</th>
<th>Don't know</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research/Scholarly work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Teaching contributions</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Service (i.e., committee work, etc.)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Extension and professional practice</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

When you select “Next” you will be taken to Question 24.
24. In the last five years, while at Iowa State, have you received a formal or informal outside job offer that you took to your department chair?

- Yes
- No (Please skip to question 26)

25. Has that formal or informal outside job offer(s) resulted in adjustments to any of the following: (Check all that apply.)

- Salary
- Course load
- Administrative responsibilities
- Leave time
- Summer salary
- Special timing of the tenure clock
- Equipment/ laboratory/ research start-up
- Employment for spouse/ partner
- None
- Other (please specify)

26. In the next three years, how likely are you to leave Iowa State?

- Very unlikely
- Somewhat unlikely
- Neither likely nor unlikely
- Somewhat likely
- Very likely
- Decline to answer
27. To what extent, if at all, have you considered the following as reasons to leave?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at all</th>
<th>To some extent</th>
<th>To a great extent</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase your salary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To improve your prospects for tenure</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>To enhance your career in other ways</td>
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<tr>
<td>To find a more supportive work environment</td>
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<tr>
<td>To increase your time to do research</td>
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<tr>
<td>To pursue a nonacademic job</td>
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<td></td>
</tr>
<tr>
<td>To reduce stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>To address child-related issues</td>
<td></td>
<td></td>
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<tr>
<td>To improve the employment situation of your spouse/ partner</td>
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<td></td>
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<tr>
<td>To lower your cost of living</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retirement</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other (please specify below)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

28. Please indicate the extent to which each of the following aspects of your life outside Iowa State has been a source of stress for you over the past 12 months. *If you are on leave this year, please answer the question for the preceding 12 months.*

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Not at all</th>
<th>Somewhat stressful</th>
<th>Very stressful</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing household responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childcare</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care of someone who is ill, disabled, aging, and/or in need of special services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of living</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

29. Do you have a spouse or domestic partner?

- Yes, I have a spouse
- Yes, I have a domestic partner
- No (please skip to question 36)
30. What is your spouse's/ domestic partner's employment status?
- Faculty member at Iowa State
- Post-doctoral research associate at Iowa State
- Graduate student at Iowa State
- Employed at Iowa State in some other capacity
- Faculty member elsewhere
- Post-doctoral research associate elsewhere
- Graduate student elsewhere
- Employed elsewhere in some other capacity
- Not employed and actively seeking employment
- Not applicable
- Other (please specify)

31. How did it happen that both you and your spouse/ domestic partner came to be employed at Iowa State? Please select the one response that comes closest to describing your situation.
- We became partners after we were both employed at Iowa State
- My spouse/ partner and I were recruited by Iowa State as a couple
- I was recruited by Iowa State and employment for my spouse/ partner followed
- My spouse/ partner was recruited by Iowa State and employment for me followed
- Not applicable

32. How satisfied is your spouse/ domestic partner with his/ her employment situation?
- Very dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Very satisfied
- Don't know
- Not applicable

33. Do you and your spouse/ domestic partner have a commuting relationship, where one or both of you commute to another community for work, or where you live in different communities from one another?
- No, my spouse/ partner lives and works in the same community as me
- Yes, my spouse/ partner and I live together, but one or both of us commutes or travels frequently to another community for work
- Yes, my spouse/ partner and I live in separate communities at least part of the time
- Not applicable
34. Has your spouse/domestic partner had problems finding an appropriate job in this area?
   ○ Yes
   ○ No
   ○ Not applicable

35. How satisfied are you with Iowa State's spouse/domestic partner benefits?
   ○ Very dissatisfied
   ○ Somewhat dissatisfied
   ○ Neither satisfied nor dissatisfied
   ○ Somewhat satisfied
   ○ Very satisfied
   ○ Not applicable

36. At any time since you started working at Iowa State, have you received relief from teaching or other workload duties for personal reasons, including care giving for a child or parent, your own health concerns, or a family crisis?
   ○ Yes, within the past year
   ○ Yes, more than a year ago but within the past five years
   ○ Yes, more than five years ago
   ○ No

37. How supportive was your department concerning your relief from teaching or other workload duties?
   ○ Very unsupportive
   ○ Somewhat unsupportive
   ○ Neither supportive nor unsupportive
   ○ Somewhat supportive
   ○ Very supportive
   ○ Not applicable
38. How many children do you have in the following age ranges?

<table>
<thead>
<tr>
<th>Age Range</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>More than 5 children</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-12 years</td>
<td></td>
<td></td>
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<tr>
<td>13-17 years</td>
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<tr>
<td>18-23 years</td>
<td></td>
<td></td>
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<tr>
<td>24 or older</td>
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</tr>
</tbody>
</table>

39. Are you currently caring for or managing care for an aging and/or ill parent, spouse, or other relative?

- Yes
- No

**DEMOGRAPHICS**

40. How many years have you been at Iowa State as a faculty member?

Years at Iowa State: [Dropdown]

41. What is your current rank?

- Full Professor
- Associate Professor
- Assistant Professor
- Senior Lecturer
- Lecturer
- Senior Clinician
- Clinician
- Adjunct Professor
- Adjunct Associate Professor
- Adjunct Assistant Professor
- Senior Instructor
- Adjunct Instructor
- Other (please specify): [Input Field]
42. What other positions have you previously held at Iowa State? *(Check all that apply.)*

- Professor
- Associate Professor
- Assistant Professor
- Visiting Professor
- Senior Lecturer
- Lecturer
- Senior Clinician
- Clinician
- Adjunct Professor
- Adjunct Associate Professor
- Adjunct Assistant Professor
- Senior Instructor
- Adjunct Instructor
- Post-Doctoral Candidate
- Graduate Student
- Undergraduate Student
- None, my current position is my first at Iowa State
- Other (please specify)

43. Employment status:

- Full-time
- Part-time
## APPENDIX B
### CODEBOOK

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Code</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCRI</td>
<td>How many of these graduate-level classes were close to your research interests?</td>
<td>{8,8: 8 or more; 7, 6, 5, 4, 3, 2, 1 8 or more}…</td>
<td>Descriptive</td>
</tr>
<tr>
<td>ADV</td>
<td>Specify the degree to which you are satisfied with the following faculty responsibilities: Advising responsibilities</td>
<td>Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>CAREO</td>
<td>Please indicate the extent to which care of someone who is ill, disabled, aging, and/or in need of special services has been a source of stress over the last 12 months.</td>
<td>Not at all stressful: 1; Somewhat stressful: 2; Very stressful: 3; Not applicable: 4</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHCSE</td>
<td>My chair creates a collegial and supportive environment</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>CHILD</td>
<td>Please indicate the extent to which childcare has been a source of stress over the last 12 months.</td>
<td>Not at all stressful: 1; Somewhat stressful: 2; Very stressful: 3; Not applicable: 4</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHILD0</td>
<td>How many children do you have in the following age ranges?</td>
<td>0=0; 1=1; 2=2; 3=3; 4=4; 5=5; 6=more than 5</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHILD13</td>
<td>How many children do you have in the following age ranges?</td>
<td>0=0; 1=1; 2=2; 3=3; 4=4; 5=5; 6=more than 5</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHILD18</td>
<td>How many children do you have in the following age ranges?</td>
<td>0=0; 1=1; 2=2; 3=3; 4=4; 5=5; 6=more than 5</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHILD24</td>
<td>How many children do you have in the following age ranges?</td>
<td>0=0; 1=1; 2=2; 3=3; 4=4; 5=5; 6=more than 5</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHILD5</td>
<td>How many children do you have in the following age ranges?</td>
<td>0=0; 1=1; 2=2; 3=3; 4=4; 5=5; 6=more than 5</td>
<td>Descriptive</td>
</tr>
<tr>
<td>CHRES</td>
<td>Please indicate your agreement or disagreement with the following statements: My chair helps me obtain the resources I need</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither agree nor disagree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>Question</td>
<td>Rating Options</td>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>CLOCK1  At any time since you started working at Iowa State, have you had your tenure clock slowed or stopped for personal reasons, including care giving for a child or parent, your own health concerns, or a family crisis?</td>
<td>1=Yes, with the past year</td>
<td>Descriptive</td>
<td></td>
</tr>
<tr>
<td>CLOCK2  At any time since you started working at Iowa State, have you had your tenure clock slowed or stopped for personal reasons, including care giving for a child or parent, your own health concerns, or a family crises?</td>
<td>1=Yes, more than a year ago but within the</td>
<td>Descriptive</td>
<td></td>
</tr>
<tr>
<td>CLOCK3  At any time since you started working at Iowa State, have you had your tenure clock slowed or stopped for personal reasons, including care giving for a child or parent, your own health concerns, or a family crises?</td>
<td>1=Yes, more than five years ago</td>
<td>Descriptive</td>
<td></td>
</tr>
<tr>
<td>COLLD   I am satisfied with opportunities to collaborate with faculty in my primary department</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
<td></td>
</tr>
<tr>
<td>CVRES   My colleagues value my research</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
<td></td>
</tr>
<tr>
<td>CVTCH   My colleagues value my teaching</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
<td></td>
</tr>
<tr>
<td>DCSE    My dean creates a collegial and supportive environment</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
<td></td>
</tr>
<tr>
<td>DPTC    Please indicate the number of departmental (formal and ad hoc) you served on within the past 12 months, excluding graduate student POS or thesis committees. If you are on leave this year, please answer the question for the preceding 12 months.</td>
<td>1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8=8; 9=more than 8</td>
<td>Descriptive</td>
<td></td>
</tr>
</tbody>
</table>
DRES Please indicate your agreement or disagreement with the following statements: My dean helps me obtain the resources I need

Strongly disagree: 1; Somewhat disagree: 2; Neither agree nor disagree: 3; Somewhat Agree: 4; Strongly agree: 5

Measurement model

EMPST Employment Status

1=Part-time; 2=Full-time

Descriptive

EXTC Please indicate the number of external committees or boards related to your discipline (e.g., accreditation, editor of a journal, officer of a professional organization) (formal and ad hoc) you served on within the past 12 months, excluding graduate student POS or thesis committees. If you are on leave this year, please answer the question for the preceding 12 months.

1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8=8; 9=more than 8

Descriptive

EXTTC Are you aware of the Iowa State extension of the tenure clock policy?

1=Yes, I am aware; 0=No, I am not aware

Descriptive

HLTH Please indicate the extent to which managing household responsibilities has been a source of stress over the last 12 months.

Not at all stressful: 1; Somewhat stressful: 2; Very stressful: 3; Not applicable: 4

Descriptive

HOUSE Please indicate the extent to which managing household responsibilities has been a source of stress over the last 12 months.

Not at all stressful: 1; Somewhat stressful: 2; Very stressful: 3; Not applicable: 4

Descriptive

PTAPT Are you aware of the Iowa State part-time appointments policy for tenure-eligible and tenured faculty?

1=Yes, I am aware; 0=No, I am not aware

Descriptive

PTRET The part-time policy will help Iowa State retain qualified faculty members.

Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5

Measurement model

PTTEN Using the part-time policy would hurt a faculty member's chances for tenure or promotion.

Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5

Measurement model

QGRAD Specify the degree to which you are satisfied with the following faculty responsibilities: Quality of graduate students

Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5

Descriptive
<table>
<thead>
<tr>
<th>RANK</th>
<th>What is your current rank?</th>
<th>1=Assistant Professor; 2=Associate Professor; 3=Full Professor</th>
<th>Descriptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>Overall, how satisfied are you being a faculty member at Iowa State?</td>
<td>Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>SPOUSE</td>
<td>Do you have a spouse or domestic partner?</td>
<td>1=Yes, I have a spouse; 2=Yes, I have a domestic partner; 0=No</td>
<td>Descriptive</td>
</tr>
<tr>
<td>TA</td>
<td>Specify the degree to which you are satisfied with the following faculty responsibilities: Access to teaching assistants</td>
<td>Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>TAUG</td>
<td>How many TAs, total, did you work with in these undergraduate classes?</td>
<td>8: 8 or more; 7=7, 6=6, 5=5; 4=4; 3=3; 2=2, 1=1</td>
<td>Descriptive</td>
</tr>
<tr>
<td>TCHG</td>
<td>How many graduate-level classes (excluding independent studies) did you teach during the last academic year?</td>
<td>1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8=8; 9=more than 8</td>
<td>Descriptive</td>
</tr>
<tr>
<td>TCHUG</td>
<td>How many undergraduate classes did you teach in the last year?</td>
<td>1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8=8; 9=more than 8</td>
<td>Descriptive</td>
</tr>
<tr>
<td>TCLEG</td>
<td>Care of a family member is not a legitimate reason to grant extra time for tenure.</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>TCREC</td>
<td>The tenure clock policy will help Iowa State recruit faculty.</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>TCSFI</td>
<td>Having a tenure clock policy shows that Iowa State is supportive of family issues.</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>TCTEN</td>
<td>Using the tenure clock policy might hurt a faculty member's chances for tenure.</td>
<td>Strongly disagree: 1; Somewhat disagree: 2; Neither disagree nor agree: 3; Somewhat agree: 4; Strongly agree: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Scale</td>
<td>Measurement Model</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>TEACH</td>
<td>Specify the degree to which you are satisfied with the following faculty responsibilities: Teaching responsibilities</td>
<td>Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>TIMES</td>
<td>Specify the degree to which you are satisfied with the following faculty responsibilities: Time available for scholarly work</td>
<td>Very dissatisfied: 1; Somewhat dissatisfied: 2; Neither satisfied nor dissatisfied: 3; Somewhat satisfied: 4; Very satisfied: 5</td>
<td>Measurement model</td>
</tr>
<tr>
<td>UGCRI</td>
<td>How many of these undergraduate classes were close to your research interests?</td>
<td>8: 8 or more; 7=7, 6=6, 5=5, 4=4, 3=3, 2=2, 1=1</td>
<td>Descriptive</td>
</tr>
<tr>
<td>UNIVC</td>
<td>Please indicate the number of university/college committees (formal and ad hoc) you served on within the past 12 months, excluding graduate student POS or thesis committees. If you are on leave this year, please answer the question for the preceding 12 months.</td>
<td>1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8=8; 9=more than 8</td>
<td>Descriptive</td>
</tr>
<tr>
<td>USERS</td>
<td>Generated this dummy variable by combining data from CLOCK1, CLOCK2, CLOCK3</td>
<td>1=Utilized clock stop policy; 2=Have not utilized clock stop policy</td>
<td>Descriptive</td>
</tr>
</tbody>
</table>
APPENDIX C

DEPENDENT CARE POLICIES AT IOWA STATE UNIVERSITY

Guidelines for Accommodating Employees’ Need to Care for Family
Faculty and P&S Employees
Office of the Executive Vice President and Provost
Updated Fall 2009

Iowa State University recognizes that faculty and professional and scientific staff face a
difficult balancing act in combining family and work commitments. To help its
employees meet this challenge, the university provides leave for certain family situations.
This leave may be partial or full, paid or unpaid, as specified below.

When P&S employees and faculty inform department chairs/directors of the need to take
leave to address certain family situations, the chair/director and the employee can assess
the situation and devise a work plan to accommodate the situation. These family
situations may include the birth/arrival of a child or the illness of the employee or a
family member.

Leave Options

Many employees will be able to draw from current accumulations of sick leave and
vacation time to help them address their family situation. The employee should consult
with the chair/director and with Human Resource Services about the appropriate use of
such paid leave.

Many employees will also qualify for the use of FMLA. FMLA (Family Medical Leave
Act) requires covered employers like ISU to provide up to 12 weeks of unpaid, job-
protected leave to “eligible” employees for certain family and medical reasons (paid
leave runs concurrently with FMLA). Under FMLA, employees are eligible if they have worked
for the employer for at least one year, and for 1,250 hours over the previous 12
months. Full information on FMLA is available on the Human Resource Services web
page (http://www.hrs.iastate.edu/hrs/files/FMLA_Flowchart_0.pdf).

New employees who have not been at Iowa State long enough to accumulate substantial
paid leave or to qualify for FMLA can explore with the department chair/director other
options for flexible work assignments.

Work Assignments

Department chairs/directors should help employees develop appropriate accommodation
plans by reviewing with the employee the current work schedule, assignments, and
responsibilities. Certain changes may allow the department to continue to fulfill its
responsibilities while the employee can adjust to a new home schedule. Possible
adjustments include the temporary reassignment of certain duties, adjustments in
office/department protocol to improve communication both on campus and electronically,
flexible work schedules, the hiring of replacement work for a portion of the
responsibilities of the employee, the possible sharing of certain duties (teaching, advising,
supervision of other personnel), or a temporary reduction to part-time. Some departments
have been able to use these situations to provide employees opportunities for learning new skills and for cross-training on key responsibilities in the department. These accommodations should allow the department and the employee to maintain quality work.

**Work Plans**

To assure that consideration is given to the employee’s career and family needs while allowing the employing unit to manage workload during the employee’s absence, each accommodation should be accompanied by a work plan. Employees should meet as soon as possible with their supervisor to indicate the need for paid or unpaid leave, and provide a proposed work plan showing anticipated length of leave, any inclusion of part-time work, proposed use of paid and unpaid leave, provisions for regular contact with the chair/director/ supervisor and department, and needs for computing or other facilities or equipment. The plan must provide for regular contact between the employer and supervisor. Tenure track faculty members can request extension of the probationary period as provided in the Faculty Handbook in certain instances. There is also a policy for part-time appointments for tenured and tenure-track faculty. See [http://www.provost.iastate.edu/faculty/handbook/faculty_handbook/section3.html](http://www.provost.iastate.edu/faculty/handbook/faculty_handbook/section3.html) (especially 3.3.1.1)

Since the employee and the chair/director will need to work together on the plan, the two might have an initial meeting to discuss details of the plan, followed by the sharing of a draft plan. After the employee and the director/chair each sign, a copy of the plan will be forwarded to the dean and provost.

Employees must have prior permission from their department chair or director for any compensated outside work during the period of the leave.

The plan may be amended by mutual agreement. Subsequent changes in the medical condition of the employee or employee’s family may require amendment of the plan to meet FMLA or other requirements.

**Summary of Responsibilities**

**What the university does:**
- Adheres to the rights of employees authorized in FMLA.
- Allows for flexibility in sustaining professional commitments.
- Allows temporary changes in work assignments as part of a written, agreed-upon plan that provides faculty and P&S staff flexibility in sustaining both the family and professional components of their lives.
- Manages accruals and other benefits appropriate to the paid and/or unpaid leave.
- Assists the department in identifying strategies and resources to facilitate the employee’s leave (full or partial) and return to the department.

**What the department does:**
- Works with the employee to review and develop a written plan for the relevant
time frame, at the same time understanding that situations arise for which it is not able to plan ahead.

- Provides flexibility in the employee's work schedule and responsibilities.
- Coordinates coverage of employee's duties during leave.
- Reviews written requests from tenure-eligible faculty for extensions of the probationary period, in accordance with the Faculty Handbook.
- Works with the employee to assess appropriateness of performance evaluation timelines and review schedules.
- May support electronic connectivity to assist employee in sustaining involvement in projects from home.
- Maintains consistent communication with employee and considers changes to the leave plan as the employee's circumstances may change.
- Retains liability in the departmental budget for employer paid portions of relevant University benefits and retirement programs.

What employee does:
- Consults early with chair, director or supervisor when the need for leave is anticipated.
- Develops a leave proposal with the department chair or director. The proposal should encompass anticipated length of leave, any inclusion of part-time work, proposed use of paid and unpaid leave, provisions for regular contact with the chair/director/supervisor and department, and needs for computing or other facilities or equipment.
- Receives, upon proper written request and when eligible, an extension of the probationary period (tenure-eligible faculty only, see the Faculty Handbook.)
- Maintains consistent communication with department and informs the department of circumstances that may alter the original agreed-upon plan.
- Retains liability for income taxes, medical premiums, and employee portions of relevant University benefits and retirement programs.

Office of the Executive Vice President and Provost
Fall 2009
Date: August 1, 2008

To: Deans
   Associate and Assistant Deans
   Directors
   Department Chairs

From: Elizabeth Hoffman
   Executive Vice President and Provost

Re: Accommodating the needs of employees to care for family
   Faculty and P&S employees

All university employees benefit from having a workplace that is sensitive to their needs to deal with various life and family situations. As a result, the attached Guidelines for Accommodating Employees’ Need to Care for Family outline our commitments to faculty and P&S employees who need to manage the arrival of children as well as other family situations including elder care, the care of a partner, personal health circumstances or the care of a child with special needs.

The revised Guidelines for Accommodating Employees’ Need to Care for Family are located on the Executive Vice President and Provost’s web site at http://www.provost.iastate.edu/faculty/resources/Guidelines.pdf

As these guidelines suggest, the following should be considered when planning with employees who need to care for family or themselves:

- Employees who are eligible should explore how the Family Medical Leave Act (FMLA) may be useful to them.
- Employees who are eligible should discuss with their chairs/directors (and their doctors, when appropriate) their options for using vacation time and sick leave.
- Faculty and P&S employees and their chairs/directors should develop a written plan for the relevant time frame involved. This proposal should encompass anticipated length of leave, any inclusion of part-time work, proposed use of paid and unpaid leave (according to university policy), provisions for regular contact with the chair/director and department, and needs for computing or other facilities or equipment.
- Tenure-eligible faculty may request an extension of the probationary period or a part-time faculty appointment by initiating a request at the department level. Details of these policies are available in the Faculty Handbook.

The Office of the Executive Vice President and Provost and Human Resource Services are available to assist employees and administrators in planning to accommodate various family situations. We will be happy to connect administrators with others who have been successful at accommodating the needs of employees.
Written Agreement
Arrival of a Child Work Plan
Faculty

Employee: _____________________________________________________________
Rank and base (A or B): ________________________________________________
Department: __________________________________________________________
Date of appointment: ___________________________ Expected date of arrival of child: ______________

Work Plan

Estimated dates of paid leave:

Planned use of unpaid leave:

Modified Duties:

   Teaching:

   Research:

   Professional Practice/Extension:

   Institutional Service:

Computer, Labs, other accommodations:

Estimated Costs to department:

Other:

Signed: ___________________________ ___________________________ Dated: ______________

    Faculty Member

    ___________________________ ___________________________ Dated: ______________

    Department Chair

Signed copy should be kept in department. Copies should be forwarded to dean and provost.
## APPENDIX D
### RELIABILITY COMPARISON BETWEEN AAUDE AND COACHE SURVEYS

Comparison of ISU Tenure-Eligible Faculty Responses to  
2008 AAUDE & 2006 COACHE Surveys  
Iowa State University 2008 Faculty Satisfaction Survey

<table>
<thead>
<tr>
<th>Survey</th>
<th>Question</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Unsatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAUDE</td>
<td>1. Overall, how satisfied are you being a faculty member at ISU?</td>
<td>64.2%</td>
<td>10.9%</td>
<td>24.1%</td>
</tr>
<tr>
<td>COACHE</td>
<td>Q45b. All things considered, how satisfied are you with your institution as a place to work?</td>
<td>64.5%</td>
<td>12.7%</td>
<td>21.2%</td>
</tr>
<tr>
<td>AAUDE</td>
<td>2.a. Salary, Level of satisfaction</td>
<td>51.7%</td>
<td>10.5%</td>
<td>38.3%</td>
</tr>
<tr>
<td>COACHE</td>
<td>Q36. How satisfied are you with your compensation (that is, your salary and benefits)?</td>
<td>52.2%</td>
<td>7.4%</td>
<td>40.4%</td>
</tr>
<tr>
<td>AAUDE</td>
<td>2.r. Time available for scholarly work, Level of satisfaction</td>
<td>37.5%</td>
<td>19.9%</td>
<td>42.6%</td>
</tr>
<tr>
<td>COACHE</td>
<td>Q30b. The amount of time you have to conduct research - Please indicate your level of satisfaction with the following:</td>
<td>41.3%</td>
<td>12.8%</td>
<td>48.1%</td>
</tr>
<tr>
<td>AAUDE</td>
<td>19. My department/unit is a good fit for me</td>
<td>68.2%</td>
<td>14.8%</td>
<td>17.0%</td>
</tr>
<tr>
<td>COACHE</td>
<td>Q40. How well you fit (e.g., your sense of belonging, your comfort level) - Please indicate your level of satisfaction with the following:</td>
<td>67.2%</td>
<td>6.9%</td>
<td>24.9%</td>
</tr>
</tbody>
</table>

1 AAUDE results in this table represent only those for tenure-eligible faculty respondents.