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Sources of stress among faculty of higher education

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SOURCES OF STRESS AMONG FACULTY OF HIGHER EDUCATION

A Thesis

Presented to

The Faculty of Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

By

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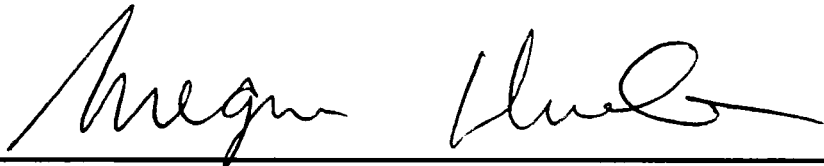
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ABSTRACT

SOURCES OF STRESS AMONG FACULTY OF HIGHER EDUCATION

Rinko Kawakami

Using a 2 (race/ethnicity) x 2 (gender) between subjects design, the
present study examined what were the primary sources of faculty stress at a
public teaching university ($n = 204$) and how their stress experiences differed
as a function of their race/ethnicity and gender. Results showed that faculty in
general considered time constraints to be the most serious sources of stress.
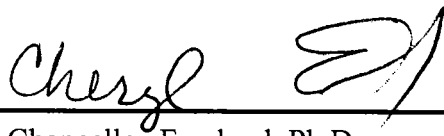Furthermore, results showed that racial/ethnic minorities reported significantly
higher levels of stress with promotion concerns than Whites, even after
controlling for the effects of age, rank, length of employment at the present
institution, and presence of children under 18 years old. However, women did
not express significantly different levels of stress as compared to men. Results
of the standard multiple regression indicated that promotion concerns and
governance activities showed a significant relationship with overall job
dissatisfaction. Suggestions for programs and policy initiatives to reduce
faculty stress are discussed.

ACKNOWLEDGEMENT

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I am also grateful to Dr. Cheryl Chancellor-Freeland and Dr. Elena Klaw for reading my thesis and providing thoughtful comments, even throughout their busy schedules, and my friend Pam Wells, for proofreading my paper.

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INTRODUCTION

Although stress is one of the most widely researched topics in organizational behavior, studies that have examined stress experience of faculty in higher education are scarce. This is probably because theories of stress (e.g., demands-control model, person-environment fit model) and special privileges such as sabbatical leaves, have contributed to researchers' belief that faculty jobs are not stressful (Winefield, 2000). However, as tax support for higher education has declined, campus climate for faculty has become harsher (Layzell, 1999; Waks, 2002). The inevitable increase in tuition has precipitated the public to expect much more from faculty (Layzell, 1999), and the introduction of new technology has created more work for them (Lindholm, Astin, Sax, & Korn, 2002).

The public demand for enhancing student diversity has imposed particularly greater demands upon racial/ethnic minority and women faculty in handling gender/minority issues (Aguirre, 2000). Their responsibilities at home, coupled with the unfriendly campus environment, have considerably elevated level of stress for these under-represented groups (Astin, Antonio, Cress, & Astin, 1997). Their high turnover rate and slower career progression (Johnsrud & Des Jarlais, 1994) speak to the seriousness of the problem and the imperative need for systematic investigation of stress in this seldom researched group.

Furthermore, Briger (1978) argued that individuals who face high demand in an unpredictable environment with few resources are most prone to suffering a high level of stress. Such warning signs simply cannot be dismissed as trivial because

stress studies on faculty of higher education suggest that high levels of stress are associated with various negative outcomes such as greater intent to leave academia (Barnes, Agao, Coombs, 1998), job dissatisfaction, poorer life satisfaction, higher stress-related health symptoms, and greater numbers of days ill (Blackburn, Horowitz, Edington, & Klos, 1986). The impact of stress on faculty's performance and health needs to be systematically investigated because excess stress clearly affectsthe faculty's work, and consequently institution effectiveness.

A study of faculty workload conducted by the researchers from California State University, San Marcos (Serpe, Large, Kilpatrick, Mason, Brown, & Juarez, 2003) found that on average, faculty across the nation spent 47.25 hours per week working on their campuses, and an additional 1.86 hours were spent off-campus performing unpaid community or professional service activities. What is alarming about this report is that stress and health experts have discovered that people most susceptible to health problems are those who work more than 48 hours per week; based on the weekly hours reported in the faculty workload study (Serpe et al., 2003), it is clear that the average faculty in the United States would be at risk (Sparks, Cooper, Fried, & Shirom, 1997).

Thus, given the current situation that faculty of higher education face, and the negative outcomes associated with stress, it is more important than ever to gather empirical data on the stress experience of faculty. Thus, the purpose of the present study is to examine what sources of stress faculty find most serious and how their experiences differ as a function of their race/ethnicity and gender. In addition, what

sources of stress most strongly contribute to overall job dissatisfaction of faculty were examined. The ultimate aim of this present study is to strengthen academe by providing useful information that can help promote recruitment and retention of racial/ethnic minority and women faculty. The following sections briefly describe the definition of stress, followed by a literature review of stress among faculty.

Research on Stress

Despite an increasing interest in research on stress since the late 1970s, researchers have not agreed as to what is really meant by stress (Jex, 1998). Because the way researchers define and operationalize stress has a fundamental impact on the nature and direction of research, as well as on the interpretation of results (Cooper, Dewe, & O'Driscoll, 2001), this present study provides a perspective on the meaning of stress before going into a detailed discussion of faculty stress.

This study adopts the transactional approach of stress, which views stress in relation to stressor and strain rather than as an isolated response or a stimulus to a specific event (Lazarus, 1991). According to this perspective, stress refers to the overall ever-changing process in which stressors lead to strains while individuals encounter the demand, make appraisals, and attempt to cope with the issues that arise (Cooper et al., 2001). "Stressor" is the term used to identify job or organizational conditions (e.g., long working hours, role ambiguity) that may require an adaptive response from individuals (Beehr, 1987). Strain refers to a multitude of negative ways individuals may respond when their coping attempts fail (Beehr, 1987). Strains are characterized by reactions that are psychological (e.g., job dissatisfaction, anxiety,

depressed mood), physical (e.g., headaches, coronary heart disease), or behavioral (e.g., increased cigarette smoking, absenteeism, poor performance, alcohol, drug use, turnover) (Zaccaro & Riley, 1987).

According to Lazarus (1995), stress occurs "only when a person had made an evaluation that external or internal demands tax or exceed his or her resources" (p.5). Thus, stress is very much a product of an individual's perception rather than an actual event; one situation that might be construed as stressful by an individual can be regarded as stimulating by another, depending on the person's disposition and personality (Zaccaro & Riley, 1987). Although stress is not an objective event, it is still important to study in the workplace because mere perception is enough for individuals to develop a variety of behavioral and medical problems that are costly to organizations and society at large. For example, stress is often linked to unfavorable outcomes such as greater alcohol and drug abuse, accident proneness, violence, absenteeism, turnover, low performance, hastening the appearance of disease, and worsening the impact of illness (Danna & Griffin, 1999).

Although the detrimental effect of stress on organizations and society is alarming, it is important to note that stress is neither inherently bad nor destructive (Quick, Murphy, & Hurrell, 1992). In fact, at a low to moderate level, stress can enhance employee performance by keeping the individual alert and focused on the task (Salas & Driskell, 1996). Furthermore, it has been reported that certain individuals thrive under challenging conditions. Stress becomes problematic only when it is excessive, prolonged, or when individual's resources are too scant to cope

with it (Zaccaro & Riley, 1987). There is a great emphasis on the negative aspects of stress in the literature, because investigating the way to control costly negative effects is usually regarded to be more important than finding the optimal level of stress that can facilitate performance (Zaccaro & Riley, 1987).

Stress Research on Faculty

Although research on occupational stress has notably increased over the past several decades, studies that have examined the stress experience of faculty in institutions of higher education are relatively sparse. One of the reasons for this is because faculty have been hesitant about studying themselves for the fear that such work may be dismissed as self-serving (Johnsrud, 2002). The more important reason, however, is that faculty's work has traditionally been considered not stressful (Doyle & Hind, 1998; Thorsen, 1996; Winefield, 2000). The flexible nature of faculty's work and privileges such as a sabbatical leave, have contributed to the impression that faculty's work is free from time constraints. Tenure also seems to guarantee lifetime job security. Despite the fact that faculty receive relatively low pay given their education, faculty have been envied by people in other occupations for 'perks' such as overseas trips for research and/or conference purposes and long breaks between semesters (Thorsen, 1996; Winefield, 2000).

Moreover, various stress theories seem to support the consensus that faculty's job consists of a relatively lower level of stress. For example, according to Karasek's (1979) demands-control model, most stressful jobs are those that combine high demands with low control, autonomy, or decision latitude. At least in the past,

faculty's job would not have fallen in this category (Winefield, 2000). Another influential theory of stress, person-environment fit model (French, Caplan, & Harrison, 1984) views stress as a consequence of two types of mismatch: a mismatch between the requirements of the job and the ability of the worker, or a mismatch between the worker's expectation of what the job involves and what the job actually involves (Winefield & Jarrett, 2001). The fact that most individuals who enter the academic profession are highly educated and usually hold doctorate degree suggests that the first type of mismatch would be rare. Because most faculty have had substantial experience in research and teaching prior to entering their profession (Winefield, 2000), and faculty have the freedom to pursue their own research interests, the second type of mismatch would also be considered unlikely.

Changing Environment for Higher Education

The environment in higher education is changing and along with it are the conditions of faculty work (Layzell, 1999; Taylor, 1999; Waks, 2002). This transformation has been facilitated mainly by two forces: 1) the decline in tax support for higher education that began in the 1980s, and 2) the emergence of information technology in the late 1990s (Waks, 2002).

Since 1980, tax support for higher education has been declining as legislatures are faced with competing claims between K-12 education, health care, and corrections of convicts (Layzell, 1999; Waks, 2002). As the tax support dwindled, institutions of higher education became increasingly dependent on tuition dollars to support their operations. Inevitably, tuition and fees rapidly grew along with public criticisms and

scrutiny for educational institutions and faculty in general (Layzell, 1999). Books that assailed faculty of higher education with criticisms became popular, and the media began to depict professors as being content, lazy, arrogant, and out of touch with the world outside (Hagedorn, 2000).

As the financial burden intensified for the families of students, public demand for improvement in the quality of education, especially at the undergraduate level, became considerable (Layzell, 1999). Business leaders besieged that institutions of higher education were neglecting to teach young people a multitude of important skills that were necessary in the contemporary workplace such as flexibility, multi-disciplinary communication, and cultural sensitivity (Layzell, 1999). Moreover, concerns were raised as to whether traditional lecture-oriented curricula and instructional methods were still appropriate to address the various learning needs of an increasingly diverse body of non-traditional students (e.g., working adults, women, racial/ethnic minorities) (Layzell, 1999). Generally, the public became dismayed by the observation that despite its key role as a source of tuition revenue, undergraduate teaching was being overlooked by faculty in favor of esoteric research, which the public considered to have very little practical value outside the academe (Waks, 2002).

In order to respond to budget demands more flexibly, institutions of higher education have started replacing an increasing number of tenure-track faculty with part-time faculty and contract faculty, who have full-time appointments for a certain length of time (Caison, 2003; Kezar, 2000; Layzell, 1999). In fact, it is estimated that part-time faculty employment has nearly doubled over the last 20 years (Kezar, 2000).

Such a hiring practice is advantageous to university management because compensation for part-time or contract faculty is often less than half of tenured or tenure-track faculty, and their temporary status allows management to freely shift resources based on other demands (Caison, 2003; Kezar, 2000). However, the expansion of part-time or contract faculty has been reported to have a negative effect on full-time faculty, especially in the area of workload (Caison, 2003; Kezar, 2000). Because non-tenure track faculty are less able to follow students' progress continuously over the years or to maintain ties within the community, they are less likely to be assigned to student advising or service responsibilities (Caison, 2003). With the increasingly reduced number of tenure-track faculty, the pressure on full-time permanent faculty to fill student advising and service duties is increasing (Caison, 2003).

Furthermore, this trend in hiring a growing number of part-time faculty has led an impetus to a heated debate over a highly prized faculty privilege, the tenure system (Caison, 2003). Faculty ardently continue to support the tenure, arguing that the system is essential to attract best minds in academe (Lindholm et al., 2002), to preserve academic freedom, and most importantly, to protect them from capricious behavior of management (Layzell, 1999). On the other hand, the public has a difficult time understanding why faculty are still afforded the luxury of tenure, when they as workers, are constantly being subjected to the fear of layoffs in their jobs or as partakers of education, required to pay higher tuition (Layzell, 1999). The management and legislators dispute that the system is inefficient because it impedes

management flexibility, keeps unproductive faculty in the institution, and limits the creativity and experimentation of junior faculty by making them avoid taking risks (Caison, 2003; Layzell, 1999).

A concern over the increase in tuition costs, public demand for better quality of undergraduate instructions, and skepticism toward institutions of higher education and faculty in general, have led at least 11 states to implement the performance-based funding program. In this program the availability of funding to institutions of higher education is tied to faculty performance, especially in the area of undergraduate instructions and the documentation of outcomes about specific goals institutions have achieved with the dollars spent (Layzell, 1999). As is evident from the introduction of such programs, the federal and state governments have become increasingly interested in the return on investment in higher education and are no longer willing to provide funding on fiduciary terms as they used to in the past (Layzell, 1999).

In response to business leaders' call for an emphasis on more 'practical' skills necessary in the today's workplace, virtual universities, such as the University of Phoenix, were developed on the Internet in the late 1990s to offer courses that would teach needed skills and offer specific credentials at an affordable cost (Waks, 2002). These virtual universities became particularly attractive to non-traditional, working adults because the courses were taught at convenient times by credible individuals who were working in the field; hence, providing real-life knowledge. Because these non-traditional students now comprise an increasing proportion of the student body in

the higher education today, the emergence of such universities has become a clear threat to the traditional university's market (Waks, 2002).

It is in response to these external pressures that has compelled faculty to become more involved in improving institutions across the nation. The Higher Education Research Institute (HERI) at University of California, Los Angeles (UCLA) has been conducting a comprehensive nationwide survey on various issues concerning full-time college or university faculty since 1989. The results of the latest HERI survey reveals that the majority of faculty today are at least minimally involved in institutional efforts to reform its curriculum (85%), general education (70%), and overall institutional mission and purpose (63%) (Lindholm et al., 2002). Not surprisingly, these institutional endeavors appear to be contributing to the increased levels of stress reported by faculty. Specifically, today's faculty are more likely to experience "moderate" or "extreme" stress due to institutional procedures and red tape (71%, up from 68% in 1992), committee work (62%, up from 58% in 1989), and faculty meetings (54 %, up from 50% in 1989) (Lindholm et al., 2002).

Furthermore, faculty are moving toward a use of more student-oriented, creative teaching methods (e.g., cooperative learning, group projects, class discussion) and away from extensive lectures. Perhaps, as a reflection of such teaching trends that requires more involved interactions with students, more faculty today (57 %, up from 48% in 1989) report students to be "somewhat" or an "extensive" source of stress, more so than in 1989 (Lindholm, et al., 2002).

In addition to the increase in perceived stress in these traditional aspects of faculty's work, new sources of stress have emerged with the introduction of new technology. In the 2001-02 HERI survey (Lindholm et al., 2002), keeping up with information technology was reported to be "somewhat" or an "extensive source" of stress by 69 % of faculty, ranking as the top fifth source of stress. This is not surprising, considering that increasingly more faculty today are incorporating technology into their instruction (30 %, up from 19 % in 1995) and some faculty even teach courses exclusively online via the internet (9 %, up from 2 % in 1998).

One medium of new technology that is often cited to produce a great amount of stress among workers in various white collar occupations is electronic mail, or simply e-mail. In fact, the majority of government employees in Weil and Rosen (1999) identified the demands that e-mail places on their work to be one of the most serious sources of stress. Although the effect of e-mail on the stress experience of college or university faculty has never been investigated, there is reason to believe that an introduction of such new technology might have added to faculty's stress even more intensely than people in other white collar occupations. More specifically, one aspect of faculty's work that is often not very well understood by the public is that faculty's work can and does happen at any time (Layzell, 1999). Unlike most workers who lead a typical 9 to 5 schedule, faculty's work continues throughout the day beyond their teaching hours and includes such important tasks as advising students, conducting research, and corresponding with colleagues. Although e-mail has enhanced research collaboration among faculty and made faculty more accessible to

students at any time of the day, it may also be adversely affecting the work life of

faculty by further exacerbating the on-going nature of their work and adding to their

workload. The section below is a literature review outlining potential sources of

faculty stress, and proposing hypotheses for the present study.

LITERATURE REVIEW

Using the HERI survey, Thompson and Dey (1998) identified four primary sources of stress among African-American faculty: (1) time constraints, (2) governance activities, (3) home responsibilities, and (4) promotion concerns. Because these sources are similar to the sources identified as problematic in other studies (Astin, Korn, & Dey, 1991; Astin et al., 1997; Barnes et al., 1998; Brown et al., 1986; Cessio, 1991; Dey, Ramirez, Korn, & Astin, 1992; Doyle & Hind, 1998; Dua, 1994; Endres & Wearden, 1996; Gmelch, Lovrich, & Wilke, 1984; Lindholm et al., 2002; Sax, Astin, Arredondo, & Korn, 1996; Sax, Astin, Korn, & Gilmartin, 1999; Thorsen, 1996; Witt & Lovrich, 1998), this present study reviews the literature on these four sources of stress.

Time Constraints

Despite what has popularly been believed, empirical studies suggest that faculty spend longer hours on the job than people in most other occupations. According to Serpe et al. (2003), a sample of faculty from various institutions of higher education across the nation spends an average of 47.25 hours per week on their work. On the other hand, recent data from the Bureau of Labor Statistics has revealed that only 35.5% of employed adults of working age (25 to 54 years) in the United States spend more than 41 hours per week on their job (Herman, 1999). Considering that faculty falls into this minority group of individuals who work extensive hours, it is no surprise that an accumulating body of literatures suggests that the most stressful aspects of faculty work concerns time constraints.

Since the beginning of the HERI survey in 1989, time pressure has always been ranked as the number one source of stress by a large margin. More specifically, over 80% of faculty reported time pressure to be the "extensive" or "moderate" source of stress in each of the three years the HERI survey has been conducted (Astin et al., 1991; Dey et al., 1992; Lindholm et al., 2002; Sax et al., 1996; Sax et al., 1999). Closely following time pressures, lack of personal time has been ranked as the number two source of stress, reported to be an "extensive" or "moderate" source of stress by more than 77% of faculty every three years.

Thorsen (1996) conducted a study that exclusively focused on the stress experience of faculty from four universities in Canada. Consistent with the HERI surveys, Thorsen found that faculty not only suffered from time constraints, but in fact, it was by far the greatest source of stress. Indeed, six of the top ten sources of stress identified in Thorsen were directly related to time constraints (e.g., "finding adequate time for my research," "finding time to prepare a manuscript for publication," "insufficient time to keep abreast of academic area"). Moreover, results showed that the items consisting of a time element were perceived to be more stressful than items without a time element (e.g., "having too much paper work") (Thorsen, 1996).

Among those tasks that demand faculty's time, time constraints associated with research activities were perceived to be the most serious. Closely related to time constraints, "feeling that I have too heavy a work load" also ranked high. Interestingly, however, in Thorsen's study (1996), the time faculty spent with their

students was not reported to elicit distress, despite the long hours faculty reputedly devoted to students.

Similar stressors that were found in Thorsen's study (1996) to be directly related to time constraints or concerns with work overload have been found to be consistently ranked as high stressors in other studies conducted in the United Kingdom (Doyle & Hind, 1998), Australia, (Dua, 1994; Sharpley, 1994), as well as in the United States (Barnes et al., 1998; Brown et al., 1986; Ceccio, 1991; Endres & Wearden, 1996; Gmelch et al., 1984; Thompson & Dey, 1998). Of those studies, Gmelch et al. (1984), using a sample of 1221 full-time faculty working at private and public doctoral granting institutions, added further insight into the nature of the distress associated with time pressures that many faculty felt. Although many of the top stressors identified by Gmelch et al's study were similar to those identified by Thorsen (e.g., having insufficient time to keep abreast with current developments in my field), the number one source of stress in Gmelch et al.'s study (1984) revealed a unique aspect of stress experienced by faculty of higher education.

More specifically, being reported to be a "serious" source of stress by 53% of faculty, "imposing excessively high self-expectations" was considered to be the most troublesome source of stress for the majority of faculty. Likewise, "trying to be perfect in job performance" was the most often listed source of stress among mass communication faculty by Endres and Wearden (1996). Interestingly, women faculty expressed significantly higher levels of stress concerning high self-expectations than their male counterparts (Witt &Lovrich, 1998).

These studies suggest that for this group of motivated individuals, their high expectations for themselves might be making the time pressures they already feel even worse because they might feel the need to spend more time on the work to meet their high standards. Thus, these findings indicate that it is not necessarily the task itself that is stressful, but it is the lack of time to do the task properly that is particularly stressful to this group of conscientious individuals (Thorsen, 1996). The fact that faculty continue to display increasingly higher overall job satisfaction, despite expressing greater work-related stress in the HERI surveys supports this notion that faculty generally enjoy what they do (Astin et al., 1991; Dey et al., 1992; Lindholm, et al., 2002; Sax, et al., 1996; Sax et al., 1999).

One potential reason that stress concerning time is felt so keenly by the majority of faculty is that not having enough time takes enjoyment out of faculty members' lives by removing them from pleasurable activities such as spending time with their children or going out with their friends. "Having job demands which interfere with other personal activities (recreation, family, and other interests)" was ranked within the top ten sources of stress for both Gmelch et al. (1984) and Doyle and Hind (1998).

Stress concerning time constraints and work overload is serious not only because it is the most frequently reported source by a large margin, but also because it is the strongest predictor of faculty's intent to leave academia. Being labeled as "time commitment," the factor which included items such as "considering the job as a source of personal strain," "subordinating one's life to one's work," and "insufficient

time to give a piece of work of proper attention" accounted for 11 percent of faculty's intent to leave academia (Barnes et al., 1998).

Moreover, the study sampling from 158 tenure track faculty from the California State University system revealed that heavy workload was the most frequently cited reason for considering a job change in 1994 (Blix et al., 1994). Those faculty who left the institution in Johnsrud and Atwater's study (1993) listed lack of time for reading (38%) and writing (41.9%) to be a serious problem; furthermore, in the same study faculty's perception of the time pressure was the strongest negative predictor of staying.

Time Constraints and Non-Traditional Faculty

Research on racial/ethnic minority and women faculty consistently revealed that these non-traditional faculty possess strikingly different values, priorities, and perceptions of the work environment compared to White men (Astin et al., 1997; Doyle & Hind, 1998; Johnsrud & Atwater, 1993; Johnsrud & Des Jarlais, 1994; Niemann & Dovidio, 1998; Olsen et al., 1995; Thomas & Asunka, 1995; Thompson & Dey, 1998; Witt & Lovrich, 1988). The most notable differences in values between non-traditional and White men faculty seems to arise from their reasons for pursuing an academic career. A national study has identified that although intellectual challenge, autonomy, and flexibility are greatly appreciated by all faculty across different groups, racial/ethnic minority and women faculty in general are much more likely than White faculty to cite "an opportunity for influencing social change" as a very important reason for pursuing an academic career (Astin et al., 1997). Naturally,

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this difference in aspiration is reflected in their priorities. Racial/ethnic minority and women faculty are much more likely than White majority and men faculty to consider providing services to the community and promoting racial/ethnic understanding as an important professional goal. Racial/ethnic minority faculty also assign a higher priority to preparing students for responsible citizenship, developing their moral character, and instilling in students a commitment to community service, as compared with their White faculty counterparts (Astin et al., 1997). In fact, Antonio (2002) found that minority faculty were three times more likely than White faculty to advise their student groups to get involved in community service. Similar to their racial/ethnic minority colleagues, women faculty of all ethnicities also considered helping students develop a moral character as an important goal; particularly, they tended to place greater value on providing students with emotional support than men faculty (Astin et al., 1997).

It has been argued that incongruity between the values held by racial/ethnic minority and women faculty, and values endorsed by the institution may be the key factor contributing to higher turnover rates and slower career progression amongst these faculty (Aguirre, 1994; Johnsrud & Sadao, 1998; Turner & Myers, 2000). Out of personal desire and the institution's requests, racial/ethnic minority and women faculty are more likely to handle minority or gender affairs, hold joint or split appointments, and carry heavier teaching loads (Antonio, 2002; Johnsrud & Des Jarlais, 1994; Olsen et al., 1995; Plata, 1996; Turner & Myers, 2000). Their small representation in academe sometimes makes them obliged to be involved in greater

commitments of service, student advising, or teaching loads (Johnsrud & Des Jarlais, 1994). Their commitment to such time consuming activities generally places them at a disadvantage, because institutional rewards and recognition are usually tied much more closely to research than service, teaching, or student advising (Johnsrud & Des Jarlais, 1994; Johnsrud & Sadao, 1998; Olsen et al., 1995). Moreover, Cessio (1991) discovered that high levels of overall stress were positively related to the amount of expected service and a total number of courses taught per academic year. Thus, it may be argued that racial/ethnic minority and women faculty who reputedly place high priority to such activities are naturally prone to experiencing high levels of stress.

Allocating time to fulfill the responsibilities of a community leader, role model, mentor, and teacher, while at the same time becoming a respected scholar, poses quite a challenge to racial/ethnic minority and women faculty (Antonio, 2002; Olsen et al., 1995; Thompson & Dey, 1998; Turner, 2002). Faculty focusing on minority and feminist issues constantly face the risk of having their research devalued or discredited as inconsequential or self-serving because scholarship in today's academe is fundamentally dominated by White men (Antonio, 2002; Johnsrud & Des Jarlais, 1994; Johnsrud & Sadao, 1998; Thomas & Asunka, 1995). Even though racial/ethnic minority and women faculty wish to spend more time and energy devoted to community involvement, student advising, and scholarly work that influence social change, they are often pressured to pull themselves away from those activities, and instead devote themselves to research on more "appropriate" topics in order to secure their positions in academe (Antonio, 2002; Johnsrud & Sadao, 1998).

One common theme that emerged from interviews conducted with 64 racial/ethnic minority women faculty is the feeling of being torn between home, community, and career (Turner, 2002). Furthermore, a majority of racial/ethnic minority faculty are constantly under pressure to prove that they deserve their positions and are not products of affirmative action (Johnsrud & Des Jarlais, 1994; Johnsrud & Sadao, 1998). To the author's knowledge, there exist no studies that compare stress concerning time constraints between White faculty and racial/ethnic minority faculty as an aggregate group. However, time constraints were found to be the number one source of stress among a national sample of African-American faculty in Thompson and Dey (1998). Moreover, being an African-American woman was the greatest positive contributor to stress concerning time constraints and overall stress level (Thompson & Dey, 1998).

A married female faculty with a child is likely to juggle her responsibilities as a faculty, a child provider, and a main contributor to household chores. Although some researchers believe that occupying multiple roles promotes psychological well-being by providing a sense of meaning to one's life, it has been documented that such benefits are relatively minimal for mothers as compared to women without children, and that occupying multiple roles is usually associated with heightened distress under conditions of heavy family responsibility (Emmons, Biernat, Tiedje, Lang, & Wartman, 1990).

Not surprisingly, numerous studies have found that women, especially those who are married, express stress concerning time constraints more acutely than men

(Astin et al., 1991; Astin et al., 1997; Blix et al, 1994; Cessio, 1991; Dey et al., 1992;

Gmelch et al., 1986; Lindholm et al., 2002; Sax et al., 1996; Sax et al., 1999;

Thompson & Dey, 1998; Thorsen, 1996; Witt & Lovrich, 1998). Particularly, women

faculty are significantly more concerned about teaching loads, and student demands

on their time, and an appropriate balance between teaching and research than men

faculty (Johnsrud & Atwater, 1993). However, one exception to such consistent

findings is a study conducted in the United Kingdom; there was no gender difference

in stress concerning time constraints (Doyle & Hind, 1998). Given these findings the

present study tested the following hypotheses:

> *Hypothesis 1a*: Faculty will identify time constraints as the most serious source
>
> of stress than any other sources.
>
> *Hypothesis 1b*: Racial/ethnic minority faculty will report greater stress
>
> concerning time constraints than White faculty.
>
> *Hypothesis 1c*: Women faculty will report greater stress concerning time
>
> constraints than men faculty.

Governance Activities

Stress relating to governance activities such as institutional procedures and red

tape (71 %, up from 68 % in 1992), committee work (62 %, up from 58 % in 1989),

and faculty meetings (54 %, up from 50 % in 1989) are considered more stress

producing today than a decade ago (Astin et al., 1991; Dey et al., 1992; Lindholm et

al., 2002). Although stress relating to governance activities were reported to be much

a more serious source of stress than research-related activities in the 2001-02 HERI

survey (Lindholm et al., 2002), faculty from other large scale studies conducted in the 1980s and 1990s generally considered research-related activities to be more stressful (Brown et al., 1986; Doyle & Hind, 1998; Gmelch et al., 1984; Thorsen, 1996). As discussed previously, the recent external pressure imposed on the institutions of higher education to reform themselves may be responsible for the increased level of stress reported in this area. The great majority of faculty believe research or teaching activities to be much more important than governance activities (Doyle & Hind, 1998; Olsen et al., 1995). The fact that faculty are asked to spend increasingly more time on the activities (Lindholm et al., 2002) in which they assign the least value may explain their intensified frustration concerning governance activities today (Doyle & Hind, 1998).

Governance Activities and Non-Traditional Faculty

No noteworthy differences were identified between racial/ethnic minority and White faculty with respect to the sources of stress relating to governance activities according to the HERI survey (Astin et al., 1997). This was also an area where relatively low levels of stress were reported by African-American faculty (Thompson & Dey, 1998).

On the other hand, women were more likely than men to express stress on most of the items relating to governance activities, including faculty meetings (58% women vs. 52% men), committee work (67% women vs. 60% men), and consulting with colleagues (59% women vs. 53% men) in the 2001-02 HERI survey. The

majority of both men and women were equally likely to assign institutional procedure and red tape as a source of stress (71% women vs. 71% men) (Lindholm et al., 2002).

Given that a relatively large number of men considered themselves to be at least minimally involved in governance activities (54% women vs. 57% men), the findings that women were more likely than men to express a greater level of stress concerning both committee work and faculty meetings are puzzling (Lindholm et al., 2002). Perhaps, this reflects a situation in which women are relegated to assume a peripheral role, whereas men actively take a leadership in carrying out committee duties and meetings. This assumption corresponds with the finding in Aguirre, Hernandez, and Martinez (1994) that women faculty perceived little opportunity to participate in decision making.

Other studies also found women faculty to experience significantly more stress related to governance activities than men faculty (Thompson & Dey, 1998; Thorsen, 1996). Among the items that assessed stress associated with governance activities in Thorsen's study (1996), "meetings which take up too much time" was considered most stressful. One explanation for why women experience considerably more stress with respect to governance activities than men might be because meetings and committee work do not always follow the scheduled timeframe. This may be particularly stressful to women because an unexpected extension of a meeting makes their time management more challenging by interfering with women faculty's other responsibilities such as picking up children from school. Based on the above findings, the following hypothesis was tested.

Hypothesis 2: Women faculty will report greater stress concerning governance

activities than men faculty.

Home Responsibilities

Closely following institutional procedures and red tape, managing household

responsibilities was ranked as the fourth most serious source of stress in the 2001-02

HERI survey (Lindholm et al., 2002). Along with the stress that faculty report due to

governance activities and students, sources relating to home responsibilities such as

managing household responsibilities (71 %, up from 64 % in 1989), child care (30 %,

up from 29 % in 1989), and care of an elderly parent (32 %, up from 26 % in 1989)

are the areas where increasingly more faculty today experience "moderate" or

"extreme" stress (Astin et al., 1991; Lindholm et al., 2002). Unfortunately, the results

of how faculty felt about home responsibilities in the other large scale studies (Gmelch

et al., 1984; Thorsen, 1996) are not available, because these studies have solely

focused on the sources of stress faculty encounter as it relates to the job.

Home Responsibilities and Non-Traditional Faculty

Although racial/ethnic minority and White faculty did not differ on the sources

of stress relating to home responsibilities (Astin et al., 1997), differences between men

faculty and women faculty were generally found on the stress relating to home

responsibilities. Women faculty were found to be more likely than men to express

stress from managing household responsibilities (79% women faculty vs. 64% men

faculty), childcare (31% women faculty vs. 30% men faculty), and care of an elderly

parent (35% women faculty vs. 27% men faculty). With the exception of the item,

"childcare", women have always been more likely than men to report stress from these sources since the beginning of the HERI survey (Astin et al., 1991; Dey et al., 1992; Lindholm et al., 2002; Sax et al., 1996; Sax et al., 1999). Moreover, despite the greater number of children reported by men faculty, women faculty were more likely than men to spend at least 17 hours per week managing household responsibilities and childcare (28 % women vs.15 % men), and reported having to interrupt their career for more than one year for family reasons (30 % women vs. 7 % men) (Lindholm et al., 2002). Emmons et al. (1990) noted that "the pressure of managing multiple roles are greatest, and the psychological benefits from employment are least, under conditions of heavy family responsibilities" (p.63) in regard to working women in general. Considering that women spend more hours tending to household chores and attending to more family obligations, it is indeed understandable that women experience stress concerning time constraints and home responsibilities more severely than men.

Neither faculty's nor a homemaker's work follows a regular 9 to 5 schedule. As it is said in a cliché, "woman's work is never done," household chores demand limitless time and attention just as does faculty's work (Witt & Lovrich, 1998). Unlike a typical office worker whose job is finished when leaving an office, those who have assumed faculty and homemaker roles must take control of their own time to manage the endless tasks associated with their work. Perhaps, the unique, on-going nature of their work might also explain why women faculty tend to experience greater stress concerning home responsibilities and time constraints. On the other hand, men, who tend to spend less time on home responsibilities, are at a distinct advantage over

women in every facet of their lives because they are afforded more time on pleasurable activities or activities that are important for career advancement. Considering these factors, the present study tested the following hypothesis.

Hypothesis 3: Women faculty will report greater stress concerning home responsibilities than men faculty.

Promotion Concerns

In the 2001-02 HERI survey, nearly half of all faculty reported research or publishing demands (47%) and/or the review/promotion process (47%) to be stress producing (Lindholm et al., 2002). Additionally, faculty have expressed stable levels of stress concerning research or publishing demands and the review/promotion process over the years, with few changes noted since 1989 (Astin et al., 1991; Dey et al., 1992; Lindholm et al., 2002; Sax et al., 1996; Sax et al., 1999).

One interesting point is that although salary is the area where faculty have expressed the least satisfaction (Clery, 2002; Lindholm et al, 2002), salaries are typically considered less stress producing than "securing funds for research" (Doyle & Hind, 1998; Gmelch et al, 1984; Thorsen, 1994). This is probably because research is the aspect of a faculty's job that has the greatest potential in influencing the multiple areas of the faculty's life as well as their future. Although salary only determines the financial situation of faculty for certain years until the next review, faculty's performance in research can influence many important aspects in their lives, including their chances of receiving various resources (e.g., salary, grants, student assistants), achieving tenure or promotion, and even their self-esteem and reputation in academia.

Therefore, it is not surprising that research-related activities such as "preparing a manuscript for publication," are consistently shown as one of the top sources of stress for faculty across the literature (Blix et al., 1994; Doyle & Hind, 1998; Gmelch et al., 1984; Lindholm et al, 2002; Thorsen, 1994).

However, the findings that faculty perceive research-related activities to be more stress producing compared to other primary activities such as teaching and service are not consistent in the literature. Despite the fact that many of the top sources of stress reported in Gmelch et al. (1984) were related to research activities, faculty from doctoral granting institutions in Gmelch et al. (1984) considered teaching to be more stressful overall than research or service activities. On the other hand, samples of faculty obtained from both research and teaching-oriented universities in Thorsen (1994), and 158 faculty from the California State University system in Blix et al. (1994) reported research to be the most stressful.

The literature suggests that ambiguity over the criteria that are used to evaluate faculty most strongly contributes to stress relating to the review/promotion process (Gmelch et al., 1984; Johnsrud & Atwater, 1993; Johnsrud & Des Jarlais, 1994), and uncertainty associated with faculty evaluation is greater for teaching and service than for research (Gmelch et al., 1984). As discussed previously, the institutions of higher education today are striving to make a transition from a research and lecture oriented ivory tower into an inclusive place of participative learning. It seems that although institutions have been shifting their values to respond to external pressures, faculty have become increasingly more confused about what their institutions are expecting of

them. Despite a heightened institutional emphasis on improving the quality of undergraduate instruction (Johnsrud & Atwater, 1993; Layzell, 1999), only 14 % of the faculty agreed to the statement, "faculty are rewarded for being good teachers," as very descriptive of their institutions (Lindholm et al., 2002). Perhaps, one explanation for such finding is that creating clear promotion/tenure criteria for teaching and service activities are much more challenging than creating clear promotion/tenure criteria for research activities. Although faculty's performance in research can be assessed by the number of published journal articles and books, it is much harder to assess teaching and service activities by objective measures. However, if institutions were to successfully make a transition into a respected place of participative learning in their community, it is crucial for them to start making every endeavor to create clear tenure/promotion criteria, especially for teaching and service activities.

Promotion Concerns and Non-Traditional Faculty

Stress related to promotion concerns (e.g., review promotion process, research publishing demands, subtle discrimination) is an area where the greatest differences have been found between racial/ethnic minority and White faculty (Astin et al., 1997; Johnsrud & Des Jarlais, 1994) and between women and men faculty (Astin et al., 1991; Dey et al., 1992; Johnsrud & Des Jarlais, 1994; Lindholm et al., 2002; Sax et al., 1996; Thompson & Dey, 1998). Racial/ethnic minority and women faculty are more likely to report higher levels of stress relating to promotion concerns than White men faculty (Astin et al., 1991; Astin et al., 1997; Dey et al., 1992; Johnsrud & Des Jarlais, 1994; Lindholm et al., 2002; Sax et al, 1996; Thompson & Dey, 1998). This is not

surprising because racial/ethnic minority and women faculty tend to achieve tenure and promotion less frequently and at a slower rate than White men faculty (Aguirre, 2000; Antonio, 2002; Doyle & Hind, 1998; Johnsrud & Des Jarlais, 1994; Thorsen, 1996). Moreover, even after women faculty are promoted, their struggles seem to continue. The literature suggests that although promotion leads to decreased levels of overall stress for men, stress often increases for women (Doyle & Hind, 1998; Richard & Krieshok, 1989). Richard and Krieshok (1989) suggest that this is probably because women faculty have a fewer number of role models and mentors who have attained high status in academe than men.

As "newcomers" to a predominantly White and male system, obstacles that racial/ethnic minority and women faculty face in their tenure/promotion processes are very much alike. For both racial/ethnic minority and women faculty, stress relating to promotion concerns seems to arise from their poor relationship with people around them, especially with their supervisor (Johnsrud & Atwater, 1993; Johnsrud & Des Jarlais, 1994; Thompson & Dey, 1998). Because racial/ethnic minority and women faculty are less likely to be part of a White male collegial network, they often miss the opportunities to acquire information, to find a mentor, and to receive support, all things that are essential in attaining tenure/promotion. This isolation from the mainstream networking group is considered to be one of the greatest obstacles to success in academe among racial/ethnic minority and women faculty (Johnsrud & Atwater, 1993; Johnsrud & Des Jarlais, 1994).

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Moreover, supervisors who evaluate racial/ethnic minority and women faculty for tenure/promotion are more likely to be White males who tend to possess different values from their racial/ethnic minority and women counterparts. As a result, racial/ethnic minority and women faculty are apprehensive that their endeavors in teaching, advising students, community service, or research on feminist/minority issues might be discredited as non-academic in the tenure/promotion review (Aguirre, 2000; Johnsrud & Des Jarlais, 1994). Indeed, fewer women (65%) agreed to the statement, "my research is valued by faculty in my department," than men (75%) in the 2001-02 HERI survey (Lindholm et al., 2002). Having an understanding supervisor might improve the stress outcomes of racial/ethnic minority and women faculty not only because such a supervisor would provide the needed mentorship and support, but also he or she could help racial/ethnic minority and women faculty better cope with the overwhelming demands that result in stress. Narayanan, Menon, and Spector (1999) showed that the most frequently used method of coping for faculty was to take direct action and to talk to their supervisors in the department.

Overall, it appears that the academic climate for racial/ethnic minorities and women is unsupportive and alienating at best; however, there have been some improvements. For example, stress from subtle discrimination (e.g., prejudice, stereotyping, harassment) that racial/ethnic minorities and women faculty have reported has displayed a significant decline since 1989 (Astin et al., 1991; Astin et al., 1997; Lindholm et al., 2002). Still, racial/ethnic minorities and women faculty are more than twice as likely to identify subtle discrimination as a source of stress than

their White (49% racial/ethnic minorities vs. 21% Whites; Astin et al., 1997) or men counterparts (36% women vs. 17% men; Lindholm et al., 2002), respectively. Moreover, women faculty are less likely than men to believe that women faculty at their institutions are treated fairly (75% women vs. 91% men; Lindholm et al., 2002). Based on these findings the following hypotheses were tested.

Hypothesis 4a: Racial/ethnic minority faculty will report greater stress relating to promotion concerns than White faculty.

Hypothesis 4b: Women faculty will report greater stress relating to promotion concerns than men faculty.

METHOD

Participants

A total of all 1650 faculty at a public teaching university in Northern California were invited to participate, but 476 responses were returned, with a response rate of 29%. Of those 476 participants, faculty who satisfied the following conditions were included in the study: (a) they had a full-time appointment, (b) they were with or without tenure, but with a tenure track position, and (c) they held academic rank of assistant professor or above. Furthermore, participants who did not correctly respond to race/ethnicity, gender, and stress questions ($n = 37$) were excluded from further analyses. Therefore, the final sample consisted of 204 faculty. The majority of the faculty were Whites (77.5%, $n = 158$), followed by Asian Americans (10.3%, $n = 21$), other (4.4%, $n = 9$), Mexican-Americans/Chicano (3.9%, $n = 8$), other Latino (2.0%, $n = 4$), Puerto Rican-American (1.0%, $n = 2$), African-Americans (0.5%, $n = 1$), and American-Indian (0.5%, $n = 1$). Of those faculty, 55% were men ($n = 113$) and 45 % ($n = 91$) were women. The distribution of age was as follows: 14% ($n = 28$) were 39 years old or younger, 49% ($n = 100$) were 40 to 54 years old, and 37% ($n = 76$) were 55 or older. More than half of the faculty were full professors (57%, $n = 116$), followed by associate professors (23%, $n = 47$), and assistant professors (20%, $n = 41$). The majority of the faculty (80%, $n = 163$) were tenured, and with an indicated primary interest of teaching rather than research (68%, $n = 138$).

Approximately half of the faculty had been employed at the institution for more than 10 years at the time of data collection (47%, $n = 95$). Despite the fact that the majority of the faculty were married or living with a partner (78%, $n = 155$), only 34% of faculty ($n = 69$) had children under 18 years old. Overall, faculty who participated in the present study tended to be White, older, more experienced, and married. Table 1 presents a summary of the demographic information for faculty who participated in the study.

Measures

Data used in the present study were a single public university portion of the national survey of college faculty and administrators conducted by the Higher Education Research Institute (HERI) at UCLA in the fall and winter of 2001-2002. The 2001-2002 HERI survey is presented in Appendix B. It was the fifth in a series of faculty surveys conducted on a triennial basis, the first of which was conducted in 1989-90 (Lindholm et al., 2001). The survey questionnaire used for the present study was based on the instruments used in the four previous surveys and included additional suggestions from the HERI advisory board and other researchers who were actively involved in studying faculty issues (Lindholm et al., 2002). In addition to the demographic information, the survey covered a wide variety of faculty issues such as how faculty members spent their time, how they interacted with students, their preferred methods of teaching and examining students, their perceptions of institutional climate, their primary sources of stress, and overall job satisfaction.

Stress Measures

The stress measure used for the present study consisted of 19 items that were designed to capture a variety of potential sources of stress for faculty both at work (e.g., research and publishing demands) and at home (e.g., marital friction). On a 3 point Likert-type scale (1 = not at all, 2 = somewhat, 3 = extensive), faculty were asked to indicate the levels of stress they had experienced for each source during the past two years.

Table 1

Demographic Information of the Faculty

Demographic Variable	*n*	*%*
Sex		
Men	113	55
Women	91	45
Ethnicity		
Whites	158	77.5
Asian-American	21	10.3
Other	9	4.4
Mexican-American/Chicano	8	3.9
Other Latino	4	2.0
Puerto Rican-American	2	1.0
African-American	1	0.5
American-Indian	1	0.5
Age		
39 years old or younger	28	14
40 to 50 years old	100	49
55 or older	76	37

table continues

table 1 continued

Rank

Full professor	116	57
Associate professor	47	23
Assistant professor	41	20

Tenure status

Tenured	163	80
Have not gained tenure	41	20

Primary interest

Toward teaching	138	68
Toward research	64	32

Length of employment at current institution

More than 10 years	95	47
10 years or less	109	53

Marital status

Married or living with a partner	155	78
Single	44	22

Presence of children under 18 years old

Have children under 18 years old	69	34
Do not have children under 18 years old	135	66

Exploratory Factor Analysis

These 19 stress items from the HERI 2001-02 survey were subjected to an exploratory factor analysis using orthogonal rotation. The purpose of the factor analysis was to reduce the items to the least number of factors that made sense conceptually. Based on suggestions by Tabachnick and Fidell (2001), items loading at .35 or greater were retained. Results of the factor analysis yielded five factors, which explained 54 % of the total variance. Although there were slight variations in the items that constituted each factor, they were very similar to the factor solution extracted in Thompson and Dey (1998). The results of the factor analysis are presented in Table 2.

Time Constraints

The first factor that emerged had high positive loadings on six items: time pressures, lack of personal time, teaching load, keeping up with information technology, students, and committee work. The first factor explained 15% of the total variance. Consistent with Thompson and Dey (1998), this factor was labeled as time constraints. Committee work was also cross-loaded on the second factor. However, committee work was dropped from this factor because it loaded much more highly on the second factor than on the first factor. In addition, a reliability analysis showed that dropping this item would improve reliability. The alpha coefficient for the time constraints was .72. The items were summed and averaged. The higher the score, the more that time constraints were perceived.

Governance Activities

The second factor displayed high positive loadings on four items: colleagues, faculty meetings, committee work, and subtle discrimination. The second factor explained 12% of the total variance. This factor was labeled governance activities. However, the item, subtle discrimination, was eliminated because a reliability analysis indicated that dropping this item would improve reliability. Moreover, this item was cross-loaded on the fourth factor. As in the study by Thompson and Dey (1998), this item conceptually seemed to belong to the promotion concerns construct. The Cronbach alpha coefficient for governance activities after dropping subtle discrimination was .79. The items were summed and averaged. The higher the score, the more that stress was perceived on governance activities.

Home Responsibilities

The third factor had positive loadings on four items, including childcare, children's problems, marital friction, and household responsibilities. The third factor explained 11% of the total variance. The factor was labeled home responsibilities. However, an item, marital friction, was eliminated because a reliability analysis indicated that dropping this item would improve reliability. Furthermore, this item did not seem conceptually related to the home responsibilities construct. Cronbach's alpha coefficient for home responsibilities after dropping marital friction was .67. The items were summed and averaged. The higher the score, the more that stress was perceived on home responsibilities.

Table 2

Stress Items and Factor Loadings

Factors and items	Factor 1	Factor 2	Factor 3
Time constraints (α = .72)			
Time pressures	.77		
Lack of personal time	.77		
Teaching load	.57		
Keeping up with information technology	.56		
Students	.48		
Committee work	(.37)		
Governance activities (α = .79)			
Colleagues		.80	
Faculty meetings		.80	
Committee work		.66	
Subtle discrimination		(.58)	
Home responsibilities (α = .67)			
Childcare			.81
Children's problems			.68
Household responsibilities			.60
Marital friction			(.60)

Table continues

table 2 continued

Factors and items	Factor 4	Factor 5
Promotion concerns (α = .62)		
Review and promotion process	.79	
Research and publishing demands	.71	
Personal finances	.54	
Subtle discrimination	.38	
My physical health	(.45)	
Aging concerns (r = .08)		
Care of elderly parent		.80
My physical health		.44

Note: Loadings were derived from exploratory factor analysis using the principle component analysis extraction method. Loading in parenthesis indicate an item that was eliminated from the factor.

Promotion Concerns

The fourth factor extracted had positive loadings on five items: review and promotion process, research and publishing demands, personal finances, subtle discrimination, and my physical health. The fourth factor explained 10% of the total variance. The factor was labeled promotion concerns. However, my physical health was dropped because including this item did not seem conceptually correct. The Cronbach's alpha coefficient for the promotion concerns after dropping my physical health was .62. The items were summed and averaged. The higher the score, the more that stress was perceived on promotion concerns.

The fifth factor had positive loadings on two items: care of an elderly parent and my physical health. The fifth factor explained 6% of the total variance. The factor was labeled aging concerns. However, the fifth factor was not included in the analysis due to its low correlation coefficient, $r = .08$.

Overall Job Satisfaction

Overall job satisfaction of faculty was assessed by one item. Faculty were asked to indicate the levels of overall job satisfaction on a 5 point Likert-type scale (1 = not applicable, 2 = not satisfied, 3 = marginally satisfied, 4 = satisfied, 5 = very satisfied).

Procedures

A letter of invitation to participate in the HERI survey was sent to the institutional research office of the university where the data for the present study were collected. The director of the office then notified HERI with the institution's intent to

participate in the survey and supplied the names and addresses of the faculty employed at the university at the time of the survey. In return, HERI sent a survey packet that included a copy of the survey instrument, a cover letter from HERI, and a pre-paid return envelop, to the director. Upon receipt of the packet, the director of the institutional research office included his or her own cover letter to further encourage participation at his or her university, along with the seven questions exclusively developed at the university to address the local issues of interests (e.g., "over the last 5 years, the university has adequately provided technological support services").

Finally, the survey packet was mailed by the director to the addresses of every faculty in mid-October of 2001. Within approximately eight weeks, HERI's processing center identified who had not responded to the survey and notified the director to send the second set of survey packets to those who had not responded. In an updated cover letter, the faculty were reminded how important it was for the university to hear from them, and they were urged to return the response to HERI by early January 2002. Again a pre-paid envelope was provided. In April 2002, the HERI processing center sent the resulting SPSS data file for the university to the institutional research office (Those who are interested in the data collection procedure for the larger HERI survey is referred to in Appendix A, Research Methodology section of Lindholm et al., 2002, p. 99).

Control Variables

The literature in faculty stress has consistently identified that higher academic status (e.g., tenure, academic rank, salary) and maturity (e.g., age, length of employment, length of employment at present institution) are associated with lower levels of stress (Blix et al., 1994; Cessio, 1991; Dua, 1994; Endres & Wearden, 1996; Gmelch et al., 1986; Hogan, Carlson, & Dua, 2002; Thompson & Dey, 1998; Thorsen, 1996). It is indeed plausible that faculty who have attained higher academic status are less prone to the detrimental effects of stress because their positions allow security and resources that are unmatched by those of junior faculty. Moreover, their success attests that they have learned the strategies to survive in academe, because faculty who could not cope with the overwhelming demands of stress leave the job or the institution before gaining tenure. Consequently, variables relating to higher status and maturity usually demonstrate strong correlations with each other (Thorsen, 1996). Therefore, for the purpose of the present analyses, only academic rank, age, and length of employment at the present institution were used as control variables, because these variables have been most frequently cited in the literature to have the strongest negative relationship with perceived stress. In addition, presence of children under 18 years old was used as a control variable, because this variable has been reported to contribute to faculty stress, especially in the area of home responsibilities (Thompson & Dey, 1998).

RESULTS

Descriptive Statistics

Table 3 presents the correlations among the variables included in the study.

As can be seen from the table, the stress variables were small to moderately related to

one another, and were negatively related to overall job satisfaction. In addition, all of

the control variables, except for the presence of children under 18 years old, were

negatively related to gender such that women tended to be younger, had a shorter

length of employment, and occupied lower ranks compared to men. Consistent with

the literature, age, length of employment at the present institution, and rank were

moderately correlated with each other, and they were also related negatively to

promotion concerns, indicating that stress associated with promotion concerns tended

to decrease with experience. As can be seen from the Table 3, overall, faculty

reported the highest level of stress associated with time constraints ($M = 2.13$,

$SD = .46$), followed by stress associated with governance activities ($M = 1.80$,

$SD = .61$), promotion concern ($M = 1.65$, $SD = .49$), and home responsibilities

($M = 1.60$, $SD = .54$). In line with the descriptive statistics, the results of a repeated

measures analysis supported Hypothesis 1a that predicted that faculty would identify

time constraints as the most serious source of stress than any of the other variables,

$F(3, 609) = 59.53$, $p < .001$.

The means and standard deviations for White and racial/ethnic minority

faculty, and those for men and women faculty for each of the stress variables are

presented in Table 4. A closer look at the table shows that racial/ethnic minority

faculty seemed to report more stress on time constraints, governance activities, and promotion concerns than White faculty. Furthermore, women faculty appeared to report more stress on all of the stress variables than men faculty.

Tests of Hypotheses

Hypotheses were tested using a 2 (race/ethnicity: White vs. racial/ethnic minority) x 2 (gender) between-subjects multivariate analysis of variance (MANOVA) with time constraints, governance activities, home responsibilities, and promotion concerns as dependent variables, first without the control variables, then with the control variables. Following the MANOVA, an analysis of variance (ANOVA) was conducted.

Table3
Correlations among the Variables (N = 204)

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 Presence of children under 18 years old[a][b]	-	-	-										
2 Age[a][c]	-	-	.15*	-									
3 Length of employment at present institution[d]	11.83	8.96	-.04	.60**	-								
4 Rank[a][e]	-	-	-.09	.67**	.60**	-							
5 Gender[a][f]	-	-	.09	-.22**	-.24**	-.26**	-						
6 Ethnicity[a][g]	-	-	.01	-.08	-.09	-.06	-.16*	-					
7 Time constraints	2.13	.46	.07	-.12	-.15*	-.01	.11	.05	-				
8 Governance activities	1.80	.61	.07	-.03	-.07	.08	.03	.07	.43**	-			
9 Home responsibilities	1.60	.54	.66**	-.17*	-.08	-.11	.17*	-.01	.28**	.13	-		
10 Promotion concerns	1.65	.49	.04	-.29**	-.36**	-.40**	.16*	.18**	.28**	.36**	.26**	-	
11 Overall job satisfaction	3.74	.79	.05	.02	.11	.00	.09	-.14	-.29**	-.33**	-.14*	-.37*	-

Notes. ** p< .01. * p< .05. [a]mean and standard deviation were not computed because values are categorized into groups. [b]Presence of children under 18 years old (1 = No, 2 = Yes). [c]Age (1 = younger than 30, 2 = 30 to 34. 3 = 35 to 39. 4 = 40 to 44. 5 = 45 to 49. 6 = 50 to 54. 7 = 55 to 59. 8 = 60 to 64. 9 = 65 to 69. 10 = 70 or older). [d]Length of employment at present institution was measured in years. [e]Rank (1 = Assistant professor, 2 = Associate professor. 3 = Full professor). [f]Gender (1 = Men. 2 = Women). [g]Ethnicity (1 = White, 2 = Racial/ethnic minority).

Results of the MANOVA Without the Control Variables

MANOVA without the control variables showed only a main effect of gender, Wilks' Λ = .95, F (4, 197) = 2.66, p < .05. Results of the ANOVA showed that men faculty and women faculty differed significantly on stress related to home responsibilities, F (1, 200) = 4.44, p < .05 and promotion concerns, F (1, 200) = 4.41, p < .05; with women expressing greater levels of stress than men on both stress variables.

MANOVA also showed the tendency of a race/ethnicity effect, Wilks' Λ = .96, F (4, 197) = 2.20, p = .07. Results of the ANOVA showed that White and racial/ethnic minority faculty differed on stress related to promotion concerns, F (1, 200) = 8.03, p < .05; with racial/ethnic minority faculty (M = 1.81, SD = .49) reporting greater levels of stress than White faculty (M = 1.60, SD = .48) on promotion concerns.

Results of the MANOVA Wwith the Control Variables

The same MANOVA was conducted with the control variables (academic rank, age, length of employment at present institution, presence of children under 18 years old) included. Results of the MANOVA produced neither an effect of gender or race/ethnicity, nor an interaction effect between them. The results showed the effects of presence of children under 18 years old, Wilks' Λ = .55, F (4, 193) = 40.24, p < .001, rank on the stress variables, Wilks' Λ = .87, F (4, 193) = 7.21, p < .001.

Table 4

Mean Stress Scores as a Function of Race/Ethnicity and Gender

		White	Racial/ethnic minority	Men	Women
	n	158	46	113	91
Time constraints	*M*	2.13	2.17	2.09	2.19
	SD	.47	.44	.48	.45
Governance activities	*M*	1.78	1.88	1.79	1.82
	SD	.59	.66	.58	.64
Home responsibilities	*M*	1.61	1.59	1.52	1.70
	SD	.53	.58	.47	.61
Promotion concerns	*M*	1.60	1.81	1.58	1.73
	SD	.48	.49	.45	.53

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Time Constraints

Hypothesis 1b predicted that racial/ethnic minority faculty would report greater stress concerning time constraints than White faculty. Hypothesis 1c predicted that women faculty would report greater stress concerning time constraints than men faculty. These hypotheses were not supported. The results of the ANOVA did not show an effect of race/ethnicity and gender on time constraints, but showed an effect of rank, F (1, 196) = 4.18, p < .05. Table 5 shows the results of the ANOVA for time constraints.

Governance Activities

Table 6 shows the results of the ANOVA for governance activities. Hypothesis 2b stated that women faculty would report greater stress concerning governance activities than men faculty. Contrary to this hypothesis, the results of the ANOVA showed that gender did not contribute to stress relating to governance activities. However, academic rank was significantly related to stress on governance activities, F (1, 196) = 4.18, p < .05, such that the higher the rank of faculty, the greater levels of stress was reported on governance activities.

Table 5

Result of ANOVA for Time Constraints (N = 204)

Source	df	F	η^2
Presence of children under 18 years old	1	.51	.00
Age	1	1.47	.01
Length of employment at present institution	1	3.18	.02
Rank	1	4.18*	.02
Gender (G)	1	1.92	.01
Ethnicity/race (E)	1	.61	.00
G × E	1	.31	.00
Error	196		

* p< .05.

Table 6

Result of ANOVA for Governance Activities (N = 204)

Source	df	F	η^2
Presence of children under 18 years old	1	1.17	.01
Age	1	1.30	.01
Length of employment at present institution	1	1.80	.01
Rank	1	4.18*	.02
Gender (G)	1	.05	.00
Ethnicity/race (E)	1	.20	.00
G × E	1	2.00	.01
Error	196		

* p<.05.

Home Responsibilities

Table 7 shows the results of the ANOVA for home responsibilities. As mentioned earlier, when the control variables were not included, the ANOVA showed a main effect for gender on home responsibilities, $F(1, 200) = 4.44, p < .05$. That is, women faculty ($M = 1.70, SD = .61$) perceived greater levels of stress concerning home responsibilities than men faculty ($M = 1.52, SD = .47$). However, when control variables were included, the effect of gender on this variable disappeared. The results of the ANOVA showed that only the presence of children under 18 years old, $F(1, 196) = 137.54, p < .001$, contributed to stress relating to home responsibilities. Faculty who had children under 18 years old ($M = 2.10, SD = .51$) experienced much greater levels of stress concerning home responsibilities than faculty who did not have children under 18 years old ($M = 1.35, SD = .35$). Therefore, Hypothesis 3b, postulating that women would report greater stress concerning home responsibilities than men was not supported.

Promotion Concerns

Table 8 presents results of the ANOVA for promotion concerns. Hypothesis 4a postulated that racial/ethnic minority faculty would report greater stress relating to promotion concerns than White faculty. Consistent with Hypothesis 4a, the results of the ANOVA revealed that even after controlling for the effects of the control variables, racial/ethnic minorities ($M = 1.81, SD = .49$) perceived higher levels of stress concerning promotion concerns, $F(1, 196) = 5.50, p < .05$, than Whites ($M = 1.60, SD = .48$). Thus, hypothesis 4a was supported.

Table 7

Result of ANOVA for Home Responsibilities (N = 204)

Source	df	F	η^2
Presence of children under 18 years old	1	137.54**	.41
Age	1	.55	.00
Length of employment at present institution	1	.00	.00
Rank	1	.05	.00
Gender (G)	1	2.54	.01
Ethnicity/race (E)	1	.01	.00
G × E	1	.24	.00
Error	196		

** p< .001.

Table 8

Result of ANOVA for Promotion Concerns (N = 204)

Source	df	F	η^2
Presence of children under 18 years old	1	.00	.00
Age	1	.04	.00
Length of employment at present institution	1	3.18	.02
Rank	1	9.29*	.05
Gender (G)	1	.71	.00
Ethnicity/race (E)	1	5.50*	.03
G × E	1	.00	.00
Error	196		

* $p < .05$.

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Hypothesis 4b expected that women faculty would report greater stress relating to promotion concerns than men faculty. The result of the ANOVA without the control variable showed an effect of gender on this variable, $F(1, 200) = 4.41, p < .05$, however, such effect disappeared when the control variables were included, $F(1, 196) = .71, ns$.

On the other hand, the results of the ANOVA also showed an effect of academic rank, $F(1, 196) = 9.29, p < .05$, on stress relating to promotion concerns. More specifically, the higher the academic rank of faculty, the lower the levels of stress faculty reported relating to promotion concerns.

Sources of Stress and Overall Job Satisfaction

To determine which sources of stress most strongly contributed to overall job satisfaction of faculty, a multiple regression analysis was performed between overall job satisfaction of faculty as an outcome variable and time constraints, governance activities, home responsibilities, and promotion concerns as predictors. Table 9 shows the result of the multiple regression analysis. The set of stress variables accounted for approximately 20% of the variance in overall job satisfaction of the faculty ($R = .44, p < .001$). Among these stress variables, promotion concerns displayed the strongest significant negative relationship to overall job satisfaction of faculty, $\beta = -.27, p < .001$, followed by governance activities, $\beta = -.18, p < .05$. However, time constraints and home responsibilities did not significantly contribute to overall job dissatisfaction of faculty.

Table 9

Result of Multiple Regression Analysis for Sources of Stress Predicting Overall Job Satisfaction of Faculty (N = 203)

Sources of Stress	β
Time constraints	-.13
Governance activities	-.18*
Home responsibilities	-.01
Promotion concerns	-.27**

Notes. * p < .05. ** p < .00.

DISCUSSION

In this time of transition for higher education, how well institutions can attend to the issues of faculty stress has great potential in influencing the future of institutions. With the recent tuition hike precipitated by declining public support for higher education, pressure imposed upon today's faculty is unlike anything their predecessors experienced.

Because the strength of the institutions is largely dependent on the quality of faculty's work, excessive stress that could motivate talented faculty to leave the institution, hamper their performance, and damage their health should be systematically investigated. To meet the rising public expectations and to compete with a new competitor (i.e., the virtual university), institutions of higher education cannot face their challenges without addressing the issue of faculty stress. Effective policy and program initiatives to assist faculty is indispensable in this trying time, not only for the reason of maximizing performance of the faculty who are already in the system today, but also to attract new faculty who can replace the older faculty who will be retiring within the next decade. Furthermore, understanding unique issues that racial/ethnic minority and women faculty are likely to face is particularly imperative because their higher rate of turnover, slower career progression, and smaller numbers in academe indicate a need for special attention to these struggling groups.

The present study examined the stress experience of faculty at a public teaching university and how their experiences differed as a function of their

race/ethnicity and gender. In addition, this study investigated what sources of stress most strongly contributed to overall job dissatisfaction of the faculty.

Interpretation of Findings

Consistent with earlier studies (e.g., Gmelch et al., 1984, Thompson & Dey, 1998, Thorsen, 1996), the present study suggests that faculty in general consider time constraints to be a much more serious source of stress than governance activities, promotion concerns, and home responsibilities. Furthermore, racial/ethnic minorities reported significantly higher levels of stress relating to promotion concerns than White faculty even when controlling for effects of age, rank, length of employment at their present institution, and presence of children under 18 years old.

The effect of gender was shown on stress related to home responsibilities and promotion concerns such that women faculty reported more stress related to home responsibilities and promotion concerns than men. However, such effect disappeared when the control variables were included in the analyses. Instead, the presence of children under 18 years old and academic rank seemed to be more related to the stress variables in the present study. The results suggest that it is not gender or race/ethnicity of faculty per se that seems to be related to stress variables, but rather, the control variables seemed to be more related to the levels of stress experienced by the faculty in the present study. Particularly, a substantial relationship between high stress scores and presence of children under 18 years old signified a challenge this group of faculty faced in balancing work and child-rearing responsibilities. Finally, findings of the present study also indicated that stress relating to promotion concerns

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and governance activities showed a significant relationship with overall job dissatisfaction.

One possible explanation for why most of the hypotheses postulated in this study were not supported may be attributed to the characteristics of the present sample. The sample consisted of a large number of full professors and older and tenured faculty who had been employed at their institution for more than ten years. Thus, it could be argued that these mature faculty might be the ones who were experiencing the least amount of stress. On the other hand, it is possible that those who were most disturbed by the detrimental effects of stress might have decided not to participate in the study because they were too overwhelmed to take on another demand of a request to fill out a survey. If this is the case, the issue of faculty stress on campus might be much more serious than it is depicted in the study, because the response rate was relatively low – 29%. Because there is no way of investigating the difference between those who participated in the study and those who did not, the accurate conditions of faculty stress cannot be depicted. Moreover, the number of racial/ethnic minority faculty who participated in the present study was quite small (22.5%, $n = 46$). Thus, the lack of differences between White faculty and racial/ethnic minority faculty might be due to the small sample size, rather than the lack of actual differences in the experience of stress between these two groups of faculty.

It should also be noted that internal consistency reliabilities for home responsibilities ($\alpha = .67$) and promotion concerns ($\alpha = .62$) were relatively low. Therefore, the findings pertaining to these two stress variables need to be interpreted

with caution. The present study was conducted in a public teaching university located in a high-cost of living, metropolitan area. Considering that the majority of faculty (68%, $n = 138$) in this study reported their primary interest was directed more toward teaching than research, the results should generalize at best to teaching universities in a similar setting and probably not to research-oriented institutions or teaching universities located in rural or suburban areas.

Limitations and Future Research

Future research should include a larger racial/ethnic minority faculty sample, and ideally conduct analyses separately for each group instead of aggregating the data to create one racial/ethnic "minority" group. Creating one "minority" group is problematic because it obscures potential differences among subgroups and assumes that all members from various racial/ethnic minority groups are the same when, in fact, they are not (Astin et al., 1997). Great variations in the way faculty from different racial/ethnic minority groups have responded to the HERI survey has been well documented in Astin et al. (1997). For example, although most faculty from racial/ethnic minority groups (e.g., Latino, African American, American Indian) considered influencing social change as the most important reason for pursuing an academic career, Asian-American faculty were more likely to report that they chose an academic career because of its prestige and status. Unfortunately, the relatively small number of faculty representing each different racial/ethnic minority group would make separate analyses of each group impractical. This may present a major

challenge to researchers interested in studying potential differences of the stress experience between various racial/ethnic minority groups of faculty.

Results of the present study indicated that having children under 18 years old most strongly contributes to high levels of stress for faculty. Because faculty who have young children are more likely to be assistant or associate professors, they are also more likely to report greater levels of stress concerning promotion concerns. A more detailed study that focuses on unique issues concerning this most troubled group is urgently needed.

With the introduction of new technology, new sources of stress seem to have emerged; however, the actual impact has not been well documented. Future research should examine how faculty incorporate technology into their daily academic work as well as the nature of stress associated with the use of new technology (e.g., e-mail, a course taught on the internet) and how such technology impacts faculty workloads.

In addition, in order to assess if workloads are distributed equitably, there needs to be further investigation on how temporary, full-time, racial/ethnic minority, and women faculty, as well as faculty from various ranks, divide their time amongst different institutional duties. The necessary adjustments in workload distribution should be made based on results of the study.

Implications

Despite its limitations, the present study was valuable in that it underscored the importance of examining the stress experience of a rarely studied group – faculty of higher education, especially racial/ethnic minority and women faculty. The study

suggested that the first step in improving an institutional climate must involve policy changes and programs to reduce stress associated with time constraints. The study also indicates that administrators have much to gain from paying particular attention to alleviating stress resulting from promotion concerns and governance activities that faculty experience, because these are the areas that most strongly contributed to their overall job dissatisfaction. Furthermore, if institutions are genuinely committed to the goal of diversifying their faculty, administrators must reassess their review and promotion procedures and address the issues of discrimination (e.g., racism, sexism) in their institutions.

The findings of this study appear to indicate that the primary source of the problem of stress stems from a failure on the institution's part to communicate clearly to faculty what is expected of them. Unclear tenure/promotion criteria not only make setting priorities and time management more challenging to faculty, but also add to the faculty's anxiety by creating more confusion to the already dreaded process. Institutions are urged to tackle this core of the problem by requiring every department to submit clear and specific statements about criteria used to evaluate faculty in research, service, and teaching. Especially, utmost care needs to be taken in clarifying service and teaching criteria. Once clear criteria statements are created, every effort should be made to disseminate the information to every faculty. Johnsrud and Des Jarlais (1994) recommend including the statements in the letter of appointment issued to new tenure-track faculty members, as well as holding periodic assessment and goal setting meetings between faculty and the department chair.

If institutions were to shift their priorities away from research to service and teaching activities, a reward system needs to be reevaluated accordingly. This may be achieved by aligning the reward system to an institutional goal. Clearly, much more emphasis should be placed on rewarding service, teaching, and curriculum development activities in order to not only respond to public pressure, but also to make the academic climate more conducive to racial/ethnic minorities and women. In addition, research focusing on minority, feminist, or diversity issues needs to be recognized as equally as important as research on mainstream issues (Turner 2002). A brief note that affirms research on minority, feminist, or diversity issues should be included in the criteria statement.

In order to prevent tenure-track faculty from shouldering the burden of excessive student advising and service loads, the number of part-time or contract faculty should be controlled by establishing clear hiring guidelines (Caison, 2003) that include the optimal ratio of tenure-track to temporary faculty (e.g., 7:3). Institutions should make an effort to ensure that the number of temporary faculty do not exceed the aforementioned optimal ratio, and there are sufficient tenure-track faculty available to accomplish institutional goals (Caison 2003).

In addition, offering university wide workshops to teach skills in time or stress management may also produce fruitful results. These workshops could feature senior faculty sharing what they have learned to be successful in academe with junior faculty. Such workshops would not only provide useful information but also facilitate opportunities for junior faculty to meet other faculty outside of their department,

expand their network, and find a mentor or a role model. This may be particularly helpful to racial/ethnic minority faculty because opportunities to meet other racial/ethnic minority faculty across campus could ease the feeling of isolation they experience in their department (Turner, 2002).

Cross-departmental research presentations may also produce similar benefits by enhancing the sense of collegiality among faculty and providing an opportunity for research collaboration. Especially, collaboration between senior and junior faculty should be facilitated with incentives such as release time and funding (Johnsrud & Des Jarlais, 1994). From working with senior faculty, junior faculty will have the opportunity to learn skills and acquire information important for their success, which could in turn help alleviate stress relating to promotion concerns.

It is also imperative that departmental chairs become aware of racial/ethnic minority and women faculty issues, especially with regard to their unique values and priorities, and isolation they feel in the workplace. They should be reminded that the most frequently used method of stress coping for faculty is talking to superiors in their department; therefore, department chairs should always be prepared to listen and to quickly respond to faculty concerns. On-going training in counseling, conflict resolution, formative evaluation, and all forms of harassment including those relating to race, color, religion, sex, age, disability, national origin, or sexual orientation, could assist department chairs in addressing subtle discrimination (Johnsrud & Des Jarlais, 1994). In addition, chairs should review the institution's harassment policy and complaint filing guidelines at least once a year with every faculty in their department.

Although reducing faculty involvement in governance activities could help faculty by lessening their stress in the short run, it would eventually hurt them because institutions' attempts in improving themselves are more likely to fail without faculty's valuable input. Thus, it is inevitable for faculty to engage in more faculty meetings and committee work at least during these times of transition for higher education today. As discussed previously, the stress associated with governance activities may arise from difficulty in time management due to a sudden surprise call to a meeting or an unexpected extension of a meeting. Therefore, the more realistic strategies for institutions is to exert efforts in notifying faculty about a meeting at earliest possible time and to follow the scheduled time-frame, rather than reducing the number of meetings.

Despite an increasingly diverse student population, institutions of higher education have not been successful in diversifying the faculty. Not only are institutions hiring a disproportionately small number of racial/ethnic minority faculty, they are also having difficulty retaining those few that they have hired (Aguirre, 2000; Bronstein, Rothblum, & Solomon, 1993; Plata, 1996; Turner & Myers, 2000). The latest national data collected by the HERI survey indicated that White faculty constituted 90% of all the full-time undergraduate positions in the United States between the year 2001 to 2002 (Lindholm et al., 2002). Clearly, institutions have much more work to do in order to achieve the goal of creating a community that can best prepare students for an international and multi-cultural society. It is projected that approximately 36% of all faculty in the United States will retire within the next

ten years (Lindholm et al, 2002); thus, the time is now to start recruiting more racial/ethnic minority faculty and to help them stay in academe by creating friendly, supportive environments.

A recent survey conducted by the Harvard Graduate School of Education revealed that new faculty members and doctoral candidates from top educational programs consider how a prospective institution portrays their concern for the quality of life for faculty to be one of the most important factors in their decision to accept employment (Trower, 2000). What was particularly surprising about the results of this study was that quality of life factors were considered even more important than salary. Therefore, with regard to attracting competent faculty, not only is investing in stress reduction a much less costly strategy than offering competitive pay, but also the study suggests that offering stress reduction strategies is actually more effective. Thus, especially in this time of declining resources, institutions have every reason to try the stress reduction strategies introduced in this paper.

Institutional commitment to alleviating stress for all faculty will produce stronger academe by improving the quality of faculty work and their health, increasing faculty overall job satisfaction, attracting competent faculty, retaining those who are already in the system, and creating diverse academe that can stand the challenges of a multi-cultural society. In this time of great transition and declining resources for higher education, how well institutions can address the faculty stress issue is likely to determine the fate of institutions in the future, especially because a substantial number of faculty are expected to retire within the next ten years. The time is now to start an

endeavor in reducing faculty stress by clarifying tenure/promotion criteria, re-examining reward systems, controlling the number of temporary faculty, providing cross-departmental workshops/research presentations, encouraging senior and junior faculty collaboration, providing training to chairs, and improving meeting arrangements. Enriching faculty life would, in turn, result in the enhanced quality of learning for students who will be the next leading force in our society. Institutions must be cognizant of the magnitude of impact faculty have on students, campus community, and our society at large, and start improving the working environment for the most important of institutional resources - their faculty.

CONCLUSIONS

The purpose of the present study was to examine the stress experience of faculty at a public teaching university and how their experiences would differ as a function of their race/ethnicity and gender. In addition, this study investigated what sources of stress most strongly contributed to overall job dissatisfaction of faculty. Results indicated that, in general, faculty consider time constraints to be the most serious source of stress. Further, racial/ethnic minority faculty reported significantly higher levels of stress relating to promotion concern than White faculty. However, women did not differ from men on the level of stress they reported. The results suggest that high levels of stress are not so much a function of race/ethnicity and gender, but rather a function of academic rank of faculty and whether faculty have children under 18 years old. Findings also indicated that stress relating to promotion concerns and governance activities had a strong association with faculty job dissatisfaction. It was concluded that faculty stress may be reduced by clarifying tenure/promotion criteria, re-examining a reward system, controlling the number of temporary faculty, providing cross-departmental workshops/research presentations, encouraging senior and junior faculty research collaboration, providing training to chairs, and improving meeting arrangements.

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Appendix A

Approval Letter to Access Data from Office of Faculty Affairs

September 19, 2003

MEMORANDUM

TO: Susan Hoagland

FROM: Joan Merdinger

RE: Authorization to Access Data

As the Associate Dean of Faculty Affairs, I grant permission to
Rinko Kawakami to utilize the HERI Faculty Survey data to
conduct statistical analyses and report her findings for the
purpose of meeting her thesis requirement. Institutional
Planning and Academic Resources will provide her the
necessary access. Ms. Kawakami's work will be supervised
and reviewed by her thesis chair, Dr. Megumi Hosoda, and I
have been assured that the survey data will be handled
appropriately. At the conclusion of her project, Ms. Kawakami
will provide a summary report of her findings to the Office of
Faculty Affairs.

C: AVP/FA Lee
       AVP/IPAR Dewitz
       Dr. Hosoda
       Mr. Steve Aquino
       Ms. Rinko Kawakami ✓

Appendix B

2001-02 Higher Education Research Institute Survey

2001 Faculty Survey
Higher Education Research Institute, UCLA

MARKING DIRECTIONS

Your responses will be read by an optical mark reader. Please,

* Use a pencil or black or blue pen.
* Fill the oval completely.
* Erase cleanly any marks you wish to change or "X" out mark if in pen.

CORRECT MARK   INCORRECT MARKS

1. What is your principal activity in your current position at this institution? (Mark one)
- Administration
- Teaching
- Research
- Services to clients and patients
- Other

2. Are you considered a full-time employee of your institution for at least nine months of the current academic year? (Mark one)
- Yes
- No

3. Your sex:
- Male
- Female

4. What is your present academic rank?
- Professor
- Associate Professor
- Assistant Professor
- Lecturer
- Instructor
- Other

5. What is your administrative title?
- Not applicable
- Director, coordinator, or administrator of an institute, center, lab, or specially-funded program
- Department Chair
- Dean
- Associate or Assistant Dean
- Vice-President, Provost, Vice-Chancellor
- President, Chancellor
- Other

6. Are you currently: (Mark one)
- Married
- Unmarried, living with partner
- Single

7. Have you ever been: (Mark all that apply)
- Divorced
- Widowed
- Separated

8. If you were to begin your career again, would you still want to be a college professor?
- Definitely yes
- Probably yes
- Not sure
- Probably no
- Definitely no

9. Racial/Ethnic group: (Mark all that apply)
- White/Caucasian
- African American/Black
- American Indian
- Asian American/Asian
- Mexican American/Chicano
- Puerto Rican American
- Other Latino
- Other

10. How many children do you have in the following age ranges?
- 0 - 4 years old .... 0 1 2 3 4+
- 5 - 12 years old .... 0 1 2 3 4+
- 13 - 17 years old .... 0 1 2 3 4+
- 18 - 23 years old .... 0 1 2 3 4+
- 24 years old or older .... 0 1 2 3 4+

11. Do your interests lie primarily in teaching or research?
- Very heavily in research
- In both, but leaning toward research
- In both, but leaning toward teaching
- Very heavily in teaching

12. On the following list, please mark one in each column:

Highest Degree Earned / Degree Currently Working On

- Bachelor's (B.A., B.S., etc.) .....
- Master's (M.A., M.S., etc.) ......
- LL.B., J.D. ....
- M.D., D.D.S. (or equivalent) ....
- Other first professional degree beyond B.A. (e.g., D.D., D.V.M.). ....
- Ed.D. ....
- Ph.D. ....
- Other degree ....
- None ....

13. During the past two years, have you engaged in any of the following activities?

(Mark one for each item)

	Yes	No
Taught an honors course	Y	N
Taught an interdisciplinary course	Y	N
Taught an ethnic studies course	Y	N
Taught a women's studies course	Y	N
Team-taught a course	Y	N
Taught a service learning course	Y	N
Worked with undergraduates on a research project	Y	N
Used intra- or extramural funds for research	Y	N
Participated in a teaching enhancement workshop	Y	N
Placed or collected assignments for a course on the Internet	Y	N
Taught a course exclusively through the Internet	Y	N

14. In the two sets of ovals shown below, please mark the most appropriate code from the fields listed on the back of the accompanying letter. (Please see example on back of accompanying letter.)

Major of highest degree held	Department of current faculty appointment
0 0	0 0
1 1	1 1
2 2	2 2
3 3	3 3
4 4	4 4
5 5	5 5
6 6	6 6
7 7	7 7
8 8	8 8
9 9	9 9

15. In the set of ovals to the right, please mark the dollar value of your base institutional salary, rounded to the nearest $1,000. (Note: Amounts above $199,000 should be marked "199")

| 0 0 0 |
| 1 1 1 |
| 2 2 |
| 3 3 |
| 4 4 |
| 5 5 |
| 6 6 |
| 7 7 |
| 8 8 |
| 9 9 |

The above salary is based on:
- 9/10 months
- 11/12 months

16. In the four sets of ovals below, please mark the last two digits of the year of each of the following:

Year of birth	Year of highest degree now held
0 0	0 0
1 1	1 1
2 2	2 2
3 3	3 3
4 4	4 4
5 5	5 5
6 6	6 6
7 7	7 7
8 8	8 8
9 9	9 9

Year of appointment at present institution	Year tenure was awarded
0 0	0 0
1 1	1 1
2 2	2 2
3 3	3 3
4 4	4 4
5 5	5 5
6 6	6 6
7 7	7 7
8 8	8 8
9 9	9 9

Are you tenured?
- Yes
- No

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NOTE: If you are between terms, on leave, or in an interim term, please answer questions 17 and 18 as they apply to the full term most recently completed at this institution.

17. During the present term, how many hours per week on the average do you actually spend on each of the following activities?

(Mark one for each activity)

	Hours Per Week							
	None	1-4	5-8	9-12	13-16	17-20	21-34	35-44	45+
Scheduled teaching (give actual, not credit hours)									
Preparing for teaching (including reading student papers and grading)									
Advising and counseling of students									
Committee work and meetings									
Other administration									
Research and scholarly writing									
Other creative products/performances									
Consultation with clients/patients									
Community or public service									
Outside consulting/freelance work									
Household/childcare duties									

18. How many of the following courses are you teaching this term?

(Mark one for each activity)

General education courses	0	1	2	3	4	5+
Other BA or BS undergraduate credit courses	0	1	2	3	4	5+
Non-BA credit courses (developmental/remedial)	0	1	2	3	4	5+
Graduate courses	0	1	2	3	4	5+

19. Indicate the importance to you of each of the following education goals for undergraduate students:

(Mark one for each item)

	Essential	Very Important	Somewhat Important	Not Important
Develop ability to think clearly	E	V	S	N
Prepare students for employment after college	E	V	S	N
Prepare students for graduate or advanced education	E	V	S	N
Develop moral character	E	V	S	N
Provide for students' emotional development	E	V	S	N
Prepare students for family living	E	V	S	N
Teach students the classic works of Western civilization	E	V	S	N
Help students develop personal values	E	V	S	N
Enhance the out-of-class experience of students	E	V	S	N
Enhance students' self-understanding	E	V	S	N
Instill in students a commitment to community service	E	V	S	N
Prepare students for responsible citizenship	E	V	S	N
Enhance students' knowledge of and appreciation for other racial/ethnic groups	E	V	S	N
Study a foreign language	E	V	S	N

20. How influential were the following people in your decision to pursue an academic career?

(Mark one for each item)

	Very Influential	Somewhat Influential	Not Influential
Father	V	S	N
Mother	V	S	N
Other relatives	V	S	N
Undergraduate faculty or advisor	V	S	N
Graduate faculty or advisor	V	S	N

For questions 21-23, mark only one response for each question.

21. How many of the following have you published?

	None	1-2	3-4	5-10	11-20	21-50	51+
Articles in academic or professional journals							
Chapters in edited volumes							
Books, manuals, or monographs							

22. How many exhibitions or performances in the fine or applied arts have you presented?

23. How many of your professional writings have been published or accepted for publication in the last two years?

24. For each of the following items, please mark either Yes or No:

	Yes	No
Have you ever held an academic administrative post?	Y	N
Have you ever received an award for outstanding teaching?	Y	N
Do you commute a long distance to work?	Y	N
Has any of your research or writing focused on women?	Y	N
Does your spouse/partner work in the same city?	Y	N
Is your spouse/partner an academic?	Y	N
Has any of your research or writing focused on racial or ethnic minorities?	Y	N
Were you born in the USA?	Y	N
Are you a U.S. citizen?	Y	N
Have you ever interrupted your professional career for more than one year for family reasons?	Y	N
Have you been sexually harassed at this institution?	Y	N
Do you plan on working beyond age 70?	Y	N
Are you a member of a faculty union?	Y	N
Is (or was) your father an academic?	Y	N
Is (or was) your mother an academic?	Y	N

During the Last Two Years, Have You:

	Yes	No
Received at least one firm job offer?	Y	N
Developed a new course?	Y	N
Considered early retirement?	Y	N
Considered leaving academe for another job?	Y	N
Taught courses at more than one institution during the same term?	Y	N
Served as a paid consultant?	Y	N
Requested/sought an early promotion?	Y	N

25. How important were each of the following in your decision to work at this college or university?

(Mark one for each item)

	Very Important	Somewhat Important	Not Important	A Deterrent
Institutional emphasis on teaching	V	S	N	D
Institutional emphasis on research	V	S	N	D
Prestige of institution	V	S	N	D
Prestige of department	V	S	N	D
Salary/benefits	V	S	N	D
Research facilities	V	S	N	D
Academic rank offered	V	S	N	D
Colleagues	V	S	N	D
Geographic location	V	S	N	D
Job opportunities for spouse	V	S	N	D
Other personal/family considerations	V	S	N	D

- 2 -

26. Indicate how important you believe each priority listed below is at your college or university:

(Mark one for each activity)

	Highest Priority	High Priority	Medium Priority	Low Priority
To promote the intellectual development of students	4	3	2	1
To help students examine and understand their personal values	4	3	2	1
To develop a sense of community among students and faculty	4	3	2	1
To develop leadership ability among students	4	3	2	1
To facilitate student involvement in community service	4	3	2	1
To help students learn how to bring about change in American society	4	3	2	1
To increase or maintain institutional prestige	4	3	2	1
To hire faculty "stars"	4	3	2	1
To recruit more minority students	4	3	2	1
To enhance the institution's national image	4	3	2	1
To create a diverse multi-cultural campus environment	4	3	2	1
To promote the religious/spiritual development of students	4	3	2	1
To mentor new faculty	4	3	2	1

27. Below are some statements about your college or university. Indicate the extent to which you agree or disagree with each of the following:

(Mark one for each item)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
Faculty are interested in students' personal problems	4	3	2	1
Racial and ethnic diversity should be more strongly reflected in the curriculum	4	3	2	1
Faculty feel that most students are well-prepared academically	4	3	2	1
This institution should hire more faculty of color	4	3	2	1
Student Affairs staff have the support and respect of faculty	4	3	2	1
Faculty are committed to the welfare of this institution	4	3	2	1
Faculty here are strongly interested in the academic problems of undergraduates	4	3	2	1
There is a lot of campus racial conflict here	4	3	2	1
Many courses include feminist perspectives	4	3	2	1
Faculty of color are treated fairly here	4	3	2	1
Women faculty are treated fairly here	4	3	2	1
Many courses involve students in community service	4	3	2	1
This institution should hire more women faculty	4	3	2	1
Most students are strongly committed to community service	4	3	2	1
Gay and lesbian faculty are treated fairly here	4	3	2	1
My research is valued by faculty in my department	4	3	2	1
My teaching is valued by faculty in my department	4	3	2	1

28. During the past two years, how involved have you been in efforts to reform the following at your institution?

(Mark one for each item)

	Very Involved	Minimally Involved	Not Involved
Overall mission, purpose	V	M	N
General education	V	M	N
Faculty roles/rewards	V	M	N
Governance	V	M	N
Curriculum	V	M	N

29. How important are each of the following in your decision to pursue an academic career?

(Mark one for each item)

	Very Important	Somewhat Important	Not Important
Autonomy	V	S	N
Flexible schedule	V	S	N
Intellectual challenge	V	S	N
Intellectual freedom	V	S	N
Freedom to pursue my scholarly/teaching interests	V	S	N
Opportunities for teaching	V	S	N
Opportunities for research	V	S	N
Occupational prestige/professional status	V	S	N
Opportunity to influence social change	V	S	N

30. Please indicate the extent to which each of the following has been a source of stress for you during the last two years:

(Mark one for each item)

	Extensive	Somewhat	Not At All
Managing household responsibilities	E	S	N
Child care	E	S	N
Care of elderly parent	E	S	N
My physical health	E	S	N
Review/promotion process	E	S	N
Subtle discrimination (e.g. prejudice, racism, sexism)	E	S	N
Personal finances	E	S	N
Committee work	E	S	N
Faculty meetings	E	S	N
Colleagues	E	S	N
Students	E	S	N
Research or publishing demands	E	S	N
Institutional procedures and "red tape"	E	S	N
Teaching load	E	S	N
Children's problems	E	S	N
Marital friction	E	S	N
Time pressures	E	S	N
Lack of personal time	E	S	N
Keeping up with information technology	E	S	N

31. How satisfied are you with the following aspects of your job?

(Mark one for each item)

	Very Satisfied	Satisfied	Marginally Satisfied	Not Satisfied	Not Applicable
Salary and fringe benefits	V	S	M	N	
Opportunity for scholarly pursuits	V	S	M	N	
Teaching load	V	S	M	N	
Quality of students	V	S	M	N	
Office/lab space	V	S	M	N	
Autonomy and independence	V	S	M	N	
Professional relationships with other faculty	V	S	M	N	
Social relationships with other faculty	V	S	M	N	
Competency of colleagues	V	S	M	N	
Visibility for jobs at other institutions/organizations	V	S	M	N	
Job security	V	S	M	N	
Relationships with administration	V	S	M	N	
Overall job satisfaction	V	S	M	N	
Opportunity to develop new ideas	V	S	M	N	
Availability of child care at this institution	V	S	M	N	

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32. Indicate how well each of the following describes your college or university:

(Mark one for each item)

	Very Descriptive	Somewhat Descriptive	Not Descriptive
It is easy for students to see faculty outside of regular office hours	V	S	N
There is a great deal of conformity among the students	V	S	N
The faculty are typically at odds with campus administrators	V	S	N
Faculty here respect each other	V	S	N
Most students are treated like "numbers in a book"	V	S	N
Social activities are overemphasized	V	S	N
Students here do not usually socialize with one another	V	S	N
Faculty are rewarded for being good teachers	V	S	N

33. In how many of the undergraduate courses that you teach do you use each of the following?

(Mark one for each item)

Evaluation Methods:

	All	Most	Some	None
Multiple-choice mid-term and/or final exams	A	M	S	N
Essay mid-term and/or final exams	A	M	S	N
Short-answer mid-term and/or final exams	A	M	S	N
Quizzes	A	M	S	N
Weekly essay assignments	A	M	S	N
Student presentations	A	M	S	N
Term/research papers	A	M	S	N
Student evaluations of each others' work	A	M	S	N
Grading on a curve	A	M	S	N
Competency-based grading	A	M	S	N

Instructional Techniques/Methods:

	All	Most	Some	None
Class discussions	A	M	S	N
Computer or machine-aided instruction	A	M	S	N
Cooperative learning (small groups)	A	M	S	N
Experiential learning/Field studies	A	M	S	N
Teaching assistants	A	M	S	N
Recitals/Demonstrations	A	M	S	N
Group projects	A	M	S	N
Independent projects	A	M	S	N
Extensive lecturing	A	M	S	N
Multiple drafts of written work	A	M	S	N
Readings on racial and ethnic issues	A	M	S	N
Readings on women and gender issues	A	M	S	N
Student-developed activities (assignments, exams, etc.)	A	M	S	N
Student-selected topics for course content	A	M	S	N
Community service as part of coursework	A	M	S	N

34. What is the highest level of education reached by your spouse/partner and your parents?

(Mark one in each column)

	Spouse/Partner	Father	Mother
8th grade or less	S	F	M
Some high school	S	F	M
Completed high school	S	F	M
Some college	S	F	M
Graduated from college	S	F	M
Attended graduate or professional school	S	F	M
Attained advanced degree	S	F	M
Does not apply (No spouse or partner)	S		

▮▮▮▮▮ ▭▭ ▮▮▮ ▭▭ ▮ ▭▭▭ ▮

DO NOT MARK IN THIS AREA

35. Please indicate your agreement with each of the following statements:

(Mark one for each item)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
Western civilization and culture should be the foundation of the undergraduate curriculum	4	3	2	1
College officials have the right to ban persons with extreme views from speaking on campus	4	3	2	1
The chief benefit of a college education is that it increases one's earning power	4	3	2	1
Promoting diversity leads to the admission of too many underprepared students	4	3	2	1
Colleges should be actively involved in solving social problems	4	3	2	1
Tenure is an outmoded concept	4	3	2	1
Colleges should encourage students to be involved in community service activities	4	3	2	1
Community service should be given weight in college admissions decisions	4	3	2	1
Tenure is essential to attract the best minds to academe	4	3	2	1
A racially/ethnically diverse student body enhances the educational experience of all students	4	3	2	1
External pressures often prevent researchers from being completely objective in the conduct of their work	4	3	2	1

36. How would you characterize your political views? (Mark one)

Far Left   Middle-of-the-road   Conservative

Liberal   Far Right

37. Indicate the importance to you personally of each of the following:

(Mark one for each item)

	Essential	Very Important	Somewhat Important	Not Important
Becoming an authority in my field	E	V	S	N
Influencing the political structure	E	V	S	N
Influencing social values	E	V	S	N
Raising a family	E	V	S	N
Being very well-off financially	E	V	S	N
Helping others who are in difficulty	E	V	S	N
Becoming involved in programs to clean up the environment	E	V	S	N
Developing a meaningful philosophy of life	E	V	S	N
Helping to promote racial understanding	E	V	S	N
Obtaining recognition from my colleagues for contributions to my special field	E	V	S	N
Integrating spirituality into my life	E	V	S	N
Being a good colleague	E	V	S	N
Being a good teacher	E	V	S	N
Achieving congruence between my own values and institutional values	E	V	S	N

ADDITIONAL QUESTIONS: If you received additional questions, mark answers below:

38. A B C D E	45. A B C D E	52. A B C D E
39. A B C D E	46. A B C D E	53. A B C D E
40. A B C D E	47. A B C D E	54. A B C D E
41. A B C D E	48. A B C D E	55. A B C D E
42. A B C D E	49. A B C D E	56. A B C D E
43. A B C D E	50. A B C D E	57. A B C D E
44. A B C D E	51. A B C D E	58. A B C D E

Please return your completed questionnaire in the postage-paid envelope to:
Higher Education Research Institute
2905 West Service Road, Eagan, MN 55121

THANK YOU!

SUPPLEMENTAL CAMPUS QUESTIONS

Please respond to the following questions by marking your response in the ADDITIONAL QUESTIONS area shown at the bottom right on page 4 of the HERI survey instrument.

38. In your opinion, to what extent has your present workload impacted your scholarly productivity?
A-Significantly Diminished
B- Slightly Diminished
C- Not Changed
D- Slightly Increased
E- Significantly Increased

39. During the past several years, the quality of faculty in my department has:
A-Significantly Diminished
B- Slightly Diminished
C- Not Changed
D- Slightly Increased
E- Significantly Increased

For items 40 through 44, please use the following rating scale when responding:

A- Strongly Agree
B- Somewhat Agree
C- Don't know
D- Somewhat Disagree
E- Strongly Disagree

40. Compared to 5 years ago, students are more likely to take responsibility for the outcome of their instruction:

41. Compared to 5 years ago, students are more involved in the classroom teaching/ learning process:

42. Over the last 5 years, SJSU has adequately provided technological support facilities:

43. Over the last 5 years, SJSU has adequately provided technological support services:

44. As a faculty member, I feel I can significantly influence University policies:

PLEASE DO NOT INCLUDE THIS SHEET IN THE SURVEY RETURN ENVELOPE

THANK YOU FOR TAKING TIME TO COMPLETE THE SURVEY.

HERISupplQuest.doc, 5/9/2002