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Stress Levels in Tenure-Track and Recently Tenured Faculty Members in Selected Institutions of Higher Education in Northeast Tennessee

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by

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ABSTRACT

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The purpose of this quantitative study was to compare the stress, strain, and coping levels between pretenured faculty and recently tenured faculty in institutions of higher education in Northeast Tennessee. Aging faculty population combined with talented people leaving the area is common in rural parts of the United States. There is a need to better understand the occupational factors within the faculty roles in order to better recruit and retain faculty in this region.

Four different institutions of higher education in Northeast Tennessee, producing 92 responses, participated in this study. The Occupational Stress Inventory – Revised (Osipow, 1998) was used to measure occupational stress, psychological strain, and coping resources.

With regards to one Strain (PSQ) variable, Physical Strain (PHS), those up for tenure in 2016 had a significantly higher mean of Physical Strain than those tenured in 2011. This implies that those up for tenure in 2016 may report more frequent worries about their health and physical symptoms. The data also indicated that there was significance in the Recreation scores of those who were tenured and the Recreation scores of those who have not yet received tenure. In regards to one Coping (PRQ) variable, Recreation (RE), those up for tenure in 2016 had a

significantly lower mean than those tenured in 2011. This implies that those tenured in 2011 take more advantage of recreational or leisure time.

The data indicated that there was a significant difference in Strain (PSQ) levels according to age groups. The data also indicated that there was a significant difference between Coping (PRQ) levels according to age group. Post Hoc tests were not performed as at least 1 age group had fewer than 2 cases.

The variables with the highest means were components of the Stress (ORQ) scale. Role Overload (RO) had the highest mean of 31.92. Those scoring high on this scale may describe their work load as increasing or unsupported by needed resources. Responsibility (R) had the next highest with 26.26. Those scoring high in this area may report high levels of responsibility for subordinates. Interpersonal Strain (IS), a component of the Strain (PSQ) scale, had a mean of 20.92. High scorers may report quarrels or excessive dependency on loved ones.

DEDICATION

To my beloved Seth A. Carr

For showing me how to be truly alive

For the patience, sacrifice, and enthusiasm of my accomplishments

And for the constant positivity and stability given to hold me up when I am weak

Mutual weirdness, handsome monkey!

To my parents Richard A. Ragle and Janet E. Ragle

For all you have done and continue to do just because you love me

For the acceptance, tolerance, and guidance you have shown me

And for the times I struggled to believe in myself, you believed in me

I love you more than pie before bedtime!

To my niece Emma K. Reeves

For showing me how to truly love someone more than life itself

For the compassion, empathy, and innocence you model for humanity

And for always being my best friend forever

I love you to the moon and back…at least three whole times!

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CHAPTER 1

INTRODUCTION

The American Institute of Stress states that workplace stress, strain, and coping are of great importance to employers and policy makers (i.e. human resource departments, Tennessee Board of Regents, etc.) as they can prove detrimental to the success of an organization. This detriment can take the form of accidents; absenteeism; employee turnover; diminished productivity; direct medical, legal, and insurance costs; workers' compensation awards; and tort and FELA judgments (American Institute of Stress, n.d.).

Several research institutes and most large universities have a focused effort to better understand the most important resource in the Academy - faculty. For example Nagowski (2004) found that associated costs of faculty turnover include disruptions and the loss of continuity in teaching and research programs, graduate and undergraduate advising, and departmental and institutional governance and cohesiveness. Moreover, Nagowski found the size of the start-up package per faculty member that research universities incur when they must replace departing senior faculty members by new assistant professors is now often in the $300,000 to $500,000 range. Additional costs of faculty turnover are not as quantifiable, possibly affecting an institution along the more qualitative terms of faculty morale or academic reputation (Nagowski).

It has been this researcher’s experience that aging faculty population in a place like Northeast Tennessee combined with talented people leaving the area is common in rural parts of the United States. This researcher feels there is a need to better understand the occupational factors within the faculty roles in order to better recruit and retain new faculty in this region. This

researcher also feels that in order to recruit and retain the most effective college and university faculty for this region, one must consider occupational stressors and their negative effects.

Statement of the Problem

The purpose of this study was to compare the stress, strain, and coping levels between pretenured faculty and recently tenured faculty in institutions of higher education in Northeast Tennessee. For the purpose of this study pretenured faculty were defined as full-time faculty at the assistant professor, associate professor, or professor ranks on tenure-track appointments who had not yet been awarded tenure as of the 2011-2012 academic year. Recently tenured faculty were defined as full-time faculty at the ranks of assistant professor, associate professor, or professor who completed the tenure process during the academic years of 2009-2010, 2010-2011, or 2011-2012.

Research Questions

The research questions addressed in this study will assist in determining any difference between stress, strain, and coping levels of tenure-track faculty members and faculty members who have received tenure within the past 3 years in selected institutions of higher education in Northeast Tennessee. They also address to what factors faculty members attribute any stress, strain and coping and any differences in stress, strain, and coping levels among age groups.

The following questions provide the focus for this study:

1. Is there a significant difference in stress, strain, and coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee?

2. Is there a significant difference in stress, strain, or coping levels among faculty in different demographic groups?
3. To what factors do pretenured faculty and recently tenured faculty members attribute stress and strain?

Significance of Study

Studies have been performed on faculty stress, strain, and coping; however, most samples were gathered from large universities. This study looks at a cross section of higher education institutions including small and large public and private institutions in a rural region where few faculty stress, strain, and coping studies have been reported.

The findings of this research study may be useful for governing bodies and policymakers, such as the Tennessee Board of Regents, as these organizations consider the requirements of tenure and the tenure process. The research findings may also be helpful to higher education administrators as they oversee work performance and faculty support programs. Governing boards and senior administrators could consider the implications of faculty stress, strain, and coping, including loss of productivity, tenuous workplace climates, faculty turnover, and health issues and provide faculty support programs and services to reduce the associated costs of faculty stress.

Definitions of Terms

The following definitions are provided to aid understanding of the terminology used in this research:

Adequate Cause: a basis upon which a faculty member either with academic tenure or a tenure-track or temporary appointment prior to the end of the specified term of the appointment may be dismissed or terminated (Tennessee Board of Regents, 2012a, Definitions section, para. 3).

Coping: to deal with and attempt to overcome problems and difficulties (*Mirriam-Webster's online dictionary,* n.d.).

Financial Exigency: the formal declaration by the Tennessee Board of Regents that one of its universities faces an imminent financial crisis, that there is a current or projected absence of sufficient funds (appropriated or non-appropriated) for the campus as a whole to maintain current programs and activities at a level sufficient to fulfill its educational goals and priorities, and that the budget can only be balanced by extraordinary means which include the termination of existing and continuing academic and non-academic appointments (Tennessee Board of Regents, 2012a, Definitions section para. 4).

Faculty Member: a full-time employee who holds academic rank as instructor, assistant professor, assistant clinical or research professor, associate professor, associate clinical or research professor, professor, clinical or research professor, or instructor/coordinator (Tennessee Board of Regents, 2012a, Definitions section para. 5).

Interpersonal Strain (IS): a scale on the Occupational Stress Inventory – Revised that measures the extent of disruption (e.g., withdrawal or aggressiveness) in interpersonal relationships (Osipow, 1998).

Physical Environment (PE): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual is exposed to high levels of environmental toxins or extreme physical conditions (Osipow, 1998).

Physical Strain (PHS): a scale on the Occupational Stress Inventory – Revised that measures complaints about physical illness and/or poor self-care habits (Osipow, 1998).

Probationary Employment: period of full-time professional service by a faculty member for whom an appointment letter denotes a tenure-track appointment in which he/she does not have tenure and in which he/she is evaluated by the university for the purpose of determining his/her satisfaction of the criteria for a recommendation for tenure. Probationary employment provides an opportunity for the individual to assess his/her own commitment to the university and for the university to determine whether the individual meets its perception of quality and/or projected need (Tennessee Board of Regents, 2012a, Definitions section para. 6).

Psychological Strain (PSY): a scale on the Occupational Stress Inventory – Revised that measures the extent of psychological and/or emotional problems being experienced by the individual (Osipow, 1998).

Rational/Cognitive Coping (RC): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual possesses and uses cognitive skills in the face of work-related stresses (Osipow, 1998).

Recently tenured Faculty Member: a professional employee of a northeast Tennessee college or university who has completed the tenure process during the academic years 2009-2010, 2010-2011, or 2011-2012.

Recreation (RE): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities (Osipow, 1998).

Responsibility (R): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual has, or feels, a great deal of responsibility for the performance and welfare of others on the job (Osipow, 1998).

Role Ambiguity (RA): a scale on the Occupational Stress Inventory – Revised that measures the extent to which priorities, expectations, and evaluation criteria are clear to the individual (Osipow, 1998).

Role Boundary (RB): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual is experiencing conflicting role demands and loyalties in the work setting (Osipow, 1998).

Role Insufficiency (RI): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual's training, education, skills, and experience are appropriate to job requirements (Osipow, 1998).

Role Overload (RO): a scale on the Occupational Stress Inventory – Revised that measures the extent to which job demands exceed resources (personal and workplace) and the extent to which the individual is able to accomplish workloads (Osipow, 1998).

Self-Care (SC): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress (Osipow, 1998).

Social Support (SS): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual feels support and help from those around him/her (Osipow, 1998).

Stress: any uncomfortable emotional experience accompanied by predictable biochemical, physiological, and behavioral changes (American Psychological Association, 2012b).

Strain: excessive physical or mental tension (*Mirriam-Webster's online dictionary,* n.d.).

Tennessee Board of Regents (TBR): the governing body of the State University and Community College System of Tennessee (Tennessee Board of Regents, 2012b).

Tenure: a Tennessee Board of Regents university provides certain full-time faculty with the assurance of continued employment during the academic year until retirement or dismissal for adequate cause, financial exigency, or curricular reasons (Tennessee Board of Regents, 2012a).

Tenure-Track Faculty Member: a professional employee of a northeast Tennessee college or university who has begun but not finished the tenure process during the 2011-2012 academic year.

Vocational Strain (VS): a scale on the Occupational Stress Inventory – Revised that measures the extent to which the individual is having problems in work quality or output. Attitudes toward work are also measured (Osipow, 1998).

Limitations and Delimitations

The colleges and universities selected to participate in this study are a delimitation as is the time period used. The sample was limited to Northeast Tennessee faculty members who were employed during the 2012-2013 academic school year and either received tenure within the past 3 years or were on the tenure track within a 3-year window of tenure. Faculty members must have obtained the rank of assistant professor, associate professor, or professor during or before

the 2011-2012 academic year. This study is specific to the colleges and universities included and may not be generalizable to other populations or other colleges and universities. Therefore, results are not necessarily generalizable to other faculty members or other settings.

One limitation of this study pertains to the definition and reference to stress. This study analyzed the paradigms of faculty members regarding their current work load and their self-reported levels of commitment, stress, and satisfaction. Therefore, it is important to note that the stress, strain, and coping levels and workloads presented are self-reported and may not reflect the prevalent climate of the institution.

Another limitation is related to race as a demographic variable. Other tenure studies have often used race as a demographic factor in order to further analyze research results. This study does not include race as a demographic variable as sample sizes were too small to conduct any statistical analyses. Nonetheless, it was important to move forward without the variable of race as a demographic because little is known about pretenure and posttenure stress, strain, and coping levels for faculties in this region.

While the Occupational Stress Inventory – Revised is a delimitation, an additional limitation is related to the survey completion rate. All full-time, tenure-track/recently tenured faculty members at the four participating institutions totaled 408. Although Survey Monkey showed that 111 responses were started by participants, only 92 of those qualified as completed responses. There were 19 ineligible responses that were 19 incomplete surveys. There could be important differences between those who responded and those who did not.

Overview of the Study

Chapter 1 contains an introduction including description and relevance of the study, statement of the problem, research questions, significance, and limitations of the study. Chapter 2 provides a review of literature including topics such as: occupational stress in America, occupational stress in the educational sector, occupational stress in higher education, and occupational stress among faculty. Chapter 3 is a description of the research methodology including the population, research procedures, research questions, data collection methodology, and procedures for data analysis. Chapter 4 offers an analysis of the data for each research question. Chapter 5 provides the study summary, conclusions, and recommendations for practice and further research.

CHAPTER 2

LITERATURE REVIEW

Stress can be broadly defined as a situation in which environmental demands, internal demands, or both, tax or exceed the adaptive resources of an individual, social system, or tissue system (Keller, 2012). It is pervasive in today's society, with nearly a third of Americans rating their average stress levels as elevated (Keller). Consequences of prolonged stress include adverse psychological and physical health effects, as well as an increased risk of premature mortality (Keller). In fact, the effects of stress on well-being are so well recognized that U.S. Public Health officials have called for a reduction of stress since the 1970s (Keller).

Stress is experienced when the demands of the work environment exceed the ability to cope with (or control) those demands (Lesage & Berjot, 2011). Defining stress in this way focuses attention on the work-related causes and the control measures required (Lesage & Berjot). The European Framework agreement on work-related stress highlights the necessity to assess and prevent stress in the workplace (Lesage & Berjot). Occupational health practitioners must now include assessment of the consequences of psychological risks in their clinical examinations in the same way that they assess other occupational-related disease. (Lesage & Berjot). More specifically, occupational stress has become a prevalent issue in the higher education sector.

The factors that predict professional burnout among university full-time faculty employed in traditional, virtual, public and private institutions in the United States are: age, gender, marital status, ethnicity, tenured status, university type, academic discipline, primary mode of class delivery (online vs. face to face), number and type of courses taught, degree type, job title, and

the number of students advised (Crosmer, 2009). One predictor, title, is significant in predicting emotional exhaustion as lecturers and instructors had significantly lower emotional exhaustion scores than associate professors (Crosmer). In Crosmer's (2009) study, advising loads were examined and those faculty who had large loads were found to experience more feelings of depersonalization. Participants in Crosmer's study were grouped according to advising load (none, 1-30, and 31-1,000). Advising between 15 and 250 graduate students was a significant predictor for depersonalization (Crosmer). Age was a significant predictor for personal accomplishment (Crosmer). Older age was shown to be associated with lower depersonalization scores and higher personal accomplishment scores (Crosmer). To better understand the effects of occupational stress among faculty, it is important to have background knowledge about the trends of occupational stress in the United States (Crosmer).

Occupational Stress in the United States

The 2011 "Attitudes in the American Workplace VII" Gallup Poll found that 52% of workers reported they were somewhat to extremely stressed. Forty-eight percent of participants said they have too much work to do, while 42% said that job pressures interfere with their family or personal life. Half of participants stated their workload was more demanding than the previous year's. Almost one third, 28%, said workplace demands cause the most stress in their life (American Institute of Stress, 2011).

According to an American Institute of Stress (n.d.) survey of 800,000 workers in over 300 companies, the number of employees calling in sick because of stress tripled from 1996 to 2000. An estimated 1 million workers are absent every day due to stress (American Institute of Stress). The European Agency for Safety and Health at Work reported that over half of the 550

million working days lost annually in the U.S. from absenteeism are stress related, and that one in five of all last minute no-shows are due to job stress (American Institute of Stress). If this occurs in key employees, it can have a domino effect that spreads down the line to disrupt scheduled operations (American Institute of Stress). Unanticipated absenteeism is estimated to cost American companies $602.00 per worker per year and the price tag for large employers could approach $3.5 million annually (American Institute of Stress). A 3-year study conducted in 1997 found that 60% of employee absences could be traced to psychological problems that were due to job stress (American Institute of Stress).

According to the American Psychological Association (2012a) money, work, and the economy continue to be the most frequently cited causes of stress for Americans. These three factors have remained constant for the past 5 years (American Psychological Association). In addition, a growing number of Americans are citing personal health and family health as a source of stress (American Psychological Association). Overall significant sources of stress include money, work, the economy, relationships, family responsibilities, family health problems, personal health concerns, job stability, housing costs, and personal safety (American Psychological Association). More specifically, stress can differentiate across regions in the United States.

Although stress causes many issues in the workplace, most Americans (about two thirds, across regions) are satisfied overall with their lives and believe they are doing a fair job managing stress (American Psychological Association, 2012a). Money, work, and the economy top the list of stressors across all four regions, but there are some differences (American Psychological Association). Adults in the eastern part of the United States are more likely than those in the West to name money, relationships, and job stability as causes of stress (American

Psychological Association). Those in the South are more likely than those in the West to cite family responsibilities as a significant factor leading to stress (American Psychological Association).

Occupational Stress in the Educational Sector

Occupational stress in the educational sector has been traditionally studied in two major domains: stress for PK-12 teachers and stress for higher education faculty and administrators. Differences do exist between these two educational sectors and the tenure process varies within and between the two environments as well. For example, in PK-12, most states in the U.S. are unionized, and tenure is generally automatic at the successful completion of 3 consecutive years of full-time teaching (Tennessee Board of Regents, 2012a). Teachers do not submit a dossier or "go-up" for tenure review by a committee, as is common in higher education (Hart, 2010). In the higher education sector the tenure process generally includes a review and vote by a panel of tenured peers, the approval of a department chair, and recommendation of a dean to a university or college committee, with the ultimate board appointment of tenure (Tennessee Board of Regents). In the education sector at-large, however, both teachers (PK-12) and faculty (higher education) cite reasons and differing levels of occupational stress (Hart, 2010; Tennessee Board of Regents, 2012a).

According to Rosales (2011) a condition called burnout usually occurs when an educator feels highly stressed, emotionally exhausted, and cynical or uncaring about what happens to students. According to Rosales, most teachers experience job stress at least two to four times a day, with more than 75% of educator health problems attributed to stress. Greenberg (as cited in Rosales, 2011) says anything on fire, such as beginning educators, can burn out.

Klassen and Chiu (2011) used a cross-sectional survey design to examine the impact of teacher self-efficacy, job stress, and contextual factors related to occupational commitment and quitting intention of 434 practicing teachers and 379 preservice teachers. Klassen and Chiu's results revealed that similar factors, self-efficacy, job stress, and teaching context, influence the occupational commitment and quitting intention of practicing and preservice teachers. Preservice teachers displayed higher levels of commitment and less overall stress than practicing teachers (Klassen & Chiu). Their results support the need to further investigate how time in a position relates to stress factors. In addition to length of service, other scholars such as Mendleson (2012) have examined how school types make a difference in stress.

Mendleson (2012) examined the differences in the stress levels of teachers employed in middle schools with student populations of high and low socioeconomic status (SES). Mendleson surveyed teachers regarding their occupational stress using a modified version of the Teacher Occupational Stress Factor questionnaire (TOSFQ). High-stakes testing stress was surveyed using a composite of original questions and questions culled from three surveys used in prior research (Mendleson). Mendleson found that teachers in the low-SES school were significantly more stressed about teaching and high-stakes testing than those in the high-SES school. To fully understand stress and its effects, we must also research how stress affects emotional and physical well-being.

Steinhardt, Smith Jaggars, Faulk, and Gloria (2011) led a research team that investigated the relationship between stress and depressive symptoms. The authors found that teachers experiencing greater stress were more likely to display burnout symptoms. The subscale "emotional exhaustion" was moderately related to depressive symptoms, whereas depersonalization and reduced personal accomplishment had small positive relationships

(Steinhardt et al.). After controlling for burnout and demographics, the relationship between stress and depressive symptoms was small but significant (Steinhardt et al.). Emotional exhaustion mediated the association between stress and depressive symptoms (Steinhardt et al.). The total effect of stress on depressive symptoms, taking together the direct and indirect effects via burnout, accounted for 43% of the total variance (Steinhardt et al.).

Occupational stress in the educational sector has been widely studied (e.g. Klassen & Chiu, 2011; Mendleson, 2012; Rosales, 2011; Steinhardt et al., 2011). The variables leading to occupational stress in educational systems are factors such as time in position and school environment. Additionally, the results of occupational stress have been examined and there are emotional and physical effects experienced from stress. As scholars have examined occupational stress in the educational sector at-large, it is important to better understand the particular nuances of occupational stress within the higher education environment.

Occupational Stress in Higher Education

Increasing amounts of effort are seemingly being used in higher education communities to better understand faculty occupational stress and stress factors. Positions such as *Associate Provost for Faculty Affairs* and *Dean of Faculty* are commonly being added to universities nationwide. Also, conferences on faculty recruitment and retention, NSF grants, and other national grants are aimed at not only locating well-qualified faculty members but also retaining them. Numerous studies (e.g. Jacobs, Tytherleigh, Webb, & Cooper, 2007; Reisz, 2011; Tytherleigh, Webb, Cooper, & Ricketts, 2005) provide additional insight regarding occupational stress in the higher education sector. In general, studies relate to three primary groups in the higher education landscape: administrators, staff, and faculty.

One of these higher education groups includes university administrators such as deans, department heads, and directors that report occupational stress. Gmelch and Wilke (1988) found that those ranked as university or academic administrators (e.g. deans, directors, heads of research institutes) identified as their top three stressors items that were not even ranked in the top 10 by other classifications:(1)"being asked to engage in service activities;" (2) "having to make decisions that affect lives of individuals I know;" and (3) "making presentations at professional conferences and meetings". The departmental chairs tended to combine stress elements that affect both teaching and administrative faculty, perhaps because of their elected positions and their dual academic and management roles (Gmelch & Wilke). Overall, they reported the highest incidence of "high to excessive" stress (Gmelch & Wilke). Department heads also identified one source of stress that was unique to them: "dealing with departmental and university regulations" (Gmelch & Wilke). Additional stressors cited were the need for timely completion of reports and paperwork (Gmelch & Wilke). Although each administrative faculty group had a distinct pattern of sources of stress, certain stressors were found to be common to all administrators (Gmelch & Wilke). The majority related either to time or resource constraints—insufficient time to keep abreast of current events, to do what was expected in the job, insufficient salaries, or difficulties in securing financial support (Gmelch & Wilke). In addition to higher education administrators, researchers have studied occupational stress among all university staff (e.g. Jacobs et al., 2007, Reisz, 2011, Tytherleigh et al., 2005).

Studying another higher education group, university staff, Tytherleigh et al. (2005) used a stratified random sample of all categories of staff (academic and nonacademic) from 14 universities and colleges in the United Kingdom using the ASSET model. The results revealed that the most significant source of stress for all higher education staff (irrespective of category of

employee) was job insecurity (Tytherleigh et al.). In comparison to the normative data, staff also reported significantly higher levels of stress relating to work relationships, control, and resources and communication, and significantly lower levels of commitment both from and to their organization (Tytherleigh et al.). However, staff also reported significantly lower levels of stress relating to work-life balance, overload and job overall, and lower levels of physical ill-health (Tytherleigh et al.). Significant differences were identified between staff working at older versus newer universities and by category of employee (Tytherleigh et al.). These results support the growing evidence that universities no longer provide the low stress working environments they once did (Tytherleigh et al.). Stress in the working environment can be linked to negatively impacted performance and organizational commitment.

Jacobs et al. (2007) used university-based statistics of performance and self-rated employee productivity to examine the relationship between stress levels, organizational commitment, health, and performance. The authors conducted a secondary analysis of data from staff in 13 higher education institutions. In common with earlier research, stressors had a negative linear relationship with all the performance measures used (Jacobs et al.). However, this relationship was also influenced by physical health, psychological well-being, and organizational commitment, and by the measure of performance used (Jacobs et al.). In addition, variations in the relationship between performance and stress by category of staff suggests the influence of job factors (Jacobs et al.). Research shows evidence that student numbers and personality characteristics can also affect stress levels in higher education.

Reisz (2011) reports that staff exposure to high numbers of students and tuition of postgraduates strongly predict burnout. However, staff with qualities that might make them particularly suited to the job suffered more than their less engaged colleagues (Reisz). The

quality of "openness" may make academics appealing tutors, but it also appeared to lead teachers to burnout (Reisz). Staff-to-student ratios and contact hours lead to more burdensome levels for faculty (Reisz). The analysis, which is based on 12 peer-reviewed international studies, likens levels of burnout among those who teach in higher education to those of schoolteachers and health professionals (Reisz).

The third employee group in the higher education sector is faculty. The variables leading to occupational stress in higher educational systems such as time in position, work climate, and increasing job responsibilities are present for all three employee groups of administrators, staff, and faculty. There are, however, many particular nuances of the faculty role that lead to differences in stress levels and variables among higher education faculty.

Occupational Stress Among Faculty

In 1989 Sanders surveyed faculty members consisting of deans, department heads, and teachers in Schools of Education about their perceptions of stress and methods of coping with stress. Faulty members participated from the following Tennessee Board of Regents universities: Austin Peay State University, East Tennessee State University, Memphis State University, Middle Tennessee State University, Tennessee State University, and Tennessee Technological University (Sanders). Demographic data included age, sex, marital status, ethnic background, tenure, and academic rank (Sanders). The "Stress and Stress Management" questionnaire by Anthony Saville was used to determine (a) perceived causes of illnesses related to stress; (b) perceptions of stress factors; and (c) strategies used to manage stress (Sanders). Sanders's results showed that the greatest stress related health issues were hypertension, migraine headaches, tension headaches, and ulcers. Sanders also found that the highest perceived stress factor

reported by most of the groups was publishing. Recommendations included: (1) University administrators should provide their faculty and staff with better processes for dealing with stress in their work place. (2) University administrators should recognize the value of teaching and place less importance on publishing. (3) Good teaching should be considered to be as valuable as publishing. Teachers should be recognized for excellent teaching and not be penalized for the lack of publishing. (4) Universities should consider how students may be affected by faculty stress (Sanders).

Different groups of tenured faculty perceive varying levels and dimensions of stress (Dey, 1990). This study of college faculty stressors extended the variables measured to include both on- and off-campus sources of stress and tested the implicit assumption that all faculty perceive the same dimensions of stress, albeit at different levels (Dey). Data were drawn from a 1989-90 national survey of 93,479 full-time faculty in 400 institutions (Dey). From this total, responses numbered 35,478 full time faculty and 392 institutions (Dey). This total was divided into eight groups, from each of which a random sample of 491 was drawn yielding a final sample size for this study of 3,928 (Dey). Faculty variables that Dey considered include tenure, sex, race (white or nonwhite), institutional selectivity (low, medium, high), and sector (private, public, nonsectarian, Catholic, Protestant, and 2 and 4 year). Results indicate that different groups of tenured faculty perceive varying levels and dimensions of stress (Dey). Dey found the largest differences across groups were found in "subtle discrimination." It was found that men and women perceive household responsibility stress similarly, although men express it less frequently (Dey). The findings' implications for institutional policy include differential faculty development emphases and a need for increased and more creative institutional efforts at stress

reduction (Dey). Since this study, numerous researchers have added to the existing literature related to occupational stress in academia (Dey).

In 1986 Gmelch, Wilke, and Lovrich Jr. investigated identifiable patterns of faculty stress. From a sample of 80 doctorate-granting institutions, 1,920 professors were selected and catagorized by academic rank and Biglan's academic discipline model (Gmelch et al.). The Faculty Stress Index, investigated through factor analysis, resulted in five distinct dimensions of perceived stress: reward and recognition (55% common variance); time constraints (12% common variance); departmental influence (7% common variance); professional identity (6% common variance); and student interaction (6% common variance) (Gmelch et al.). Each factor was also analyzed according to professional and personal characteristics, and the analysis resulted in significant differences in the areas of tenure, rank, age, gender, and marital status (Gmelch et al.). No differential pattern was discovered among disciplinary categories (Gmelch et al.).

In addition to faculty rank, faculty employment type such as cooperative extension, student services faculty, and instructional faculty has been studied to examine differences in academic and nonacademic faculty stressors. Cooperative extension faculty share many stressors as residential faculty (Gmelch & Wilke, 1988). Student services faculty and instructional faculty were similar on several items; however, student services faculty reported the highest stress level arose from receiving inadequate salary to meet financial needs (Gmelch & Wilke). Faculty in nonacademic assignments expressed the most stress from imposing excessively high self-expectations (Gmelch & Wilke). Some of these faculty members in higher education may leave academia due to occupational stress (Gmelch & Wilke).

According to Thorsen (1996) faculty stress is what occurs when a person perceives the demands of his or her environment clearly exceeds his or her resources to handle them. Thorsen sought to identify the nature and extent of occupational stress in the professoriate. Data were collected by a questionnaire mailed to faculty in four Ontario universities (Thorsen). The respondents were from the professorial ranks in four areas of study (Thorsen). Thorsen sought to test relationships between personal and occupational variables and perceived stress. It was found that quantity rather than the nature of the academic work was stressful (Thorsen). Teaching was the least stressful of the work functions and research the most stressful, particularly among professors in the humanities (Thorsen). The hours spent on the job and tasks that had a time constraint were significant sources of stress for this sample (Thorsen). Rank rather than tenure status appeared to be more significantly related to perceived stress (Thorsen). Stress varied by rank and there were more women at the rank of assistant or associate professor than at the rank of full professor (Thorsen). Associate professors had that greatest stress when compared to assistant or full professors (Thorsen).

In a 2011-12 study Harvard's Collaborative on Academic Careers in Higher Education asked 13,510 professors at 56 universities to rank their satisfaction with numerous aspects of their jobs on a scale from 1 to 5, with 1 being the least satisfied and 5 being the most satisfied (The Chronicle of Higher Education; Wilson). The results show that associate professors are "some of the unhappiest people in academe." They reported being significantly less satisfied than assistant or full professors on 9 of 11 questions related to research, including the amount of time they get to spend on research and the amount of course release given to focus on it (The Chronicle of Higher Education; Wilson). Associate professors were substantially less satisfied than those lower or higher ranks on five of the seven measures related to service, including the

amount of time they must spend on service and what their institutions do to assist professors with leadership roles (The Chronicle of Higher Education; Wilson). Associate professors also tend to be less satisfied with the awards they receive and are less likely than assistant or full professors to say if they had it to do over again, they would opt to be employed at their current institution (The Chronicle of Higher Education; Wilson). For most associate professors who find themselves unhappy, there are few alternatives (The Chronicle of Higher Education; Wilson). Because the academic labor market is so tight, the prospect of moving to another university is slim, particularly for those with tenure, who are more expensive than junior scholars (The Chronicle of Higher Education; Wilson). As associate professors spend more of their time on service work, and less on their own research and writing, their ability to be competitive on the job market and move to another institution is diminished (The Chronicle of Higher Education; Wilson). That leads some associate professors to feel trapped at the realization that they may be on the same campus with the same colleagues for the rest of their careers (The Chronicle of Higher Education; Wilson). A few universities are beginning to recognize the pitfalls of the associate-professor years and do something about it (The Chronicle of Higher Education; Wilson). Ohio State University is creating alternative paths for associate professors to be promoted to full professor, giving scholars credit for directing research centers that get grants, for example, rather than strictly for landing individual research grants and producing publications (The Chronicle of Higher Education; Wilson). Michigan State University has instituted a faculty orientation to midcareer and started workshops to help associate professors develop leadership and managerial skills because so much of the job is about directing and serving on committees (The Chronicle of Higher Education; Wilson).

The purpose of a study performed by Barnes, Agago, and Coombs (1998) was to investigate the relationship between job-related stress and faculty intent to leave academia. The stress variables studied were reward satisfaction, institutional or departmental reputation, time commitment, departmental or institutional influence, and student interaction (Barnes et al.). Barnes et al. also investigated the effects of academic discipline, tenure status, and gender on these relationships. Based on data from a national faculty survey of 3,070 full-time tenure-track faculty, results indicated that of the variables studied the two major correlates of intent to leave academia were time commitment and sense of community; however, time commitment did not moderate the stressor-intent relationship (Barnes et al.). Frustration due to time commitments included a sense of the job having taken over one's personal life, considering the job as a major source of stress, and having insufficient time to give a piece of work the proper attention (Barnes et al.). Sense of community added to the prediction, in that a strong sense of collegiality and institutional fit reduced the desire to withdraw from the stressful situation (Barnes et al.). Sense of community did not moderate the relationship, however. Regardless of how faculty rated the sense of community at their institution, time commitment was an important predictor of their desire to leave (Barnes et al.). Nevertheless, the main effect of sense of community indicated that over and above the impact of time commitment, knowledge of how faculty feel about their institution is an important predictor of their intent to leave (Barnes et al.). Thus, the intrinsic rewards related to work schedule and being in an intellectually stimulating and collegial environment were very important to faculty retention (Barnes et al.). Additionally, the relationship between job-related stress and faculty intent to leave academia included the effects of academic discipline, tenure status, and gender on these relationships (Barnes et al.). Though showing significant zero-order correlations with intent, when gender and tenure status were

added to the hierarchical regression analyses containing the stressors and moderators, neither variable contributed meaningfully to the prediction of intent (Barnes et al.). Academic discipline classification contributed only 2% to explained variance (Barnes et al.). A prediction model that contained all stressors, both moderators, and the background variables of gender and academic discipline accounted for 25% of the variance in intent to leave academia (Barnes et al.).

Additional scholars have noted gender differences in the presence of occupational stress among faculty. Studies of gender differences among faculty stress levels have generally concluded that women faculty experience significantly higher levels of stress than men (Schuldt & Totten, 2008). Nonteaching duties and the lack of clear expectations regarding service were the tension points for women faculty (Schuldt & Totten). Another variable studied in occupational stress research among faculty is teaching formats.

In 2008 Schuldt and Totten found that faculty engaged in online teaching tended to experience more stress. Online faculty members reported they were spending extra time in preparing and teaching classes (Schuldt & Totten). Additionally, online faculty reported frustration with being assigned to other duties without any acknowledgement of the extra time demands (Schuldt & Totten). In addition to the type of teaching assignments, such as online or classroom, there have been many studies (e.g. Areekkuzhiyil 2011; Greene et al., 2008) that have examined the differences in stress levels for tenured and untenured faculty.

Greene et al. (2008) describes the experiences, perceptions, and available support systems of untenured faculty from a southeastern United States public university system in their progress toward tenure. Survey results were used to develop a model support system for new faculty (Greene et al.). Data were collected from an online survey sent to 191 tenure-track faculty in colleges of education (Greene et al.). Greene et al. investigated the expectations for teaching,

research, and service in the colleges of education surveyed; what ways are untenured faculty supported and/or mentored; and what support system(s) need(s) to be in place to assist new faculty in balancing teaching, research, and service expectations. Respondents were asked about their workload, expectations for tenure, and formal and informal support they received on the tenure track (Greene et al.). Untenured faculty reported stressful and unbalanced lifestyles, and work expectations exceeded assigned workloads for several institutions (Greene et al.). Thirty-three percent of first-year faculty reported that they were 'very stressed' (Greene et al.). This number increased each year, rising to 49% in year 2 and 71% in year 5, in spite of the fact that new faculty gradually learn how to balance their time better over the course of their pretenure years (Greene et al.). As pretenured faculty become better at balancing and negotiating their workload, findings suggested that they become less and less satisfied with their profession (Greene et al.). These findings with regard to tenure status are disturbing because new faculty begin their careers with idealistic expectations and high enthusiasm only to become dissatisfied, stressed, and often physically ill (Greene et al.).

Another inquiry into the relationship between tenure and stress (Areekkuzhiyil, 2011) supported these aforementioned results and concluded that the organizational stress level of faculty members depends on gender, type of organization, and length of experience. The author examined the following elements: Reward & Recognition System, Organizational Progress, and Organizational Culture and all three areas contributed to the organizational stress of faculty members (Areekkuzhiyil). Areekkuzhiyil found that it is difficult to conduct a study of occupational stress among tenured and untenured faculty members without considering the many complex factors that contribute to the workplace environment. As many scholars have examined the workplace environment and demographic factors related to occupational stress, still other

scholars such as Moore (2012) and Stratford (2012) have investigated how stress affects faculty morale and retention such as looking at faculty satisfaction and organizational commitment.

Numerous studies of faculty satisfaction have been conducted in order to better understand the factors and contributors of those many issues that lead to successful faculty retention. For example, Moore (2012) found significant differences in self-reported levels of organizational commitment and job satisfaction for full-time faculty members related to perceived ethical climate (i.e. egoism, benevolence, and principled). Gender differences likewise contributed significantly to self-reported levels of organizational commitment with females reporting higher levels of organizational commitment than their male counterparts (Moore). Although females were higher in their levels of organizational commitment, there were no significant differences in levels of job satisfaction by gender (Moore). The findings demonstrated a positive correlation between the total organizational commitment scores and the total job satisfaction scores (Moore). As in this study, additional scholars have looked at outside variables beyond the control of the institution, such as family responsibilities and gender roles, and how those impact occupational stress among university faculty for both men and women.

In 1990 Ceccio reports survey results on the major factors or stressors related to teaching business and professional writing and the actual or potential coping strategies to reduce that stress. Business and professional writing faculty were asked "What is most stressful about teaching business and professional writing?" (Ceccio). Seven thousand twenty-four responses were obtained. Ceccio found the most frequently identified stressor was paper grading (38.9%). Grading with prompt return (28.7%) indicated that having to grade and promptly return many papers at one time was one of the most stressful aspects of teaching in this field (Ceccio). Class/Course issues was the second most frequently identified stressor in 20.4% of the

respondents (Ceccio). Specifically, time constraints accounted for 6.3% of these responses, with faculty reporting either that they lacked time to complete all of the necessary work or that it was too time consuming to teach effectively a course in business communication (Ceccio). Student communication (17.5%) was the theme of the third set of responses (Ceccio). Ten percent of these responses suggested that students' basic lack of English skills was highly stressful (Ceccio). Professional issues, many of which indicated faculty role conflict, was the fourth category of responses (11.5%) (Ceccio). Respondents stated that lack of status and respect associated with business communication as an academic field was a major stressor (Ceccio).

Strain Among Faculty

The presence of work-related stress and strain is viewed as a serious concern for faculty, particularly newer and female faculty. Lease (1999) examined differences in levels of occupational stress and personal strain experienced by new and experienced female and male faculty. Factors affecting the stress-strain relationship were also examined (Lease). Participants were tenure-track faculty members at three universities in the southern region of the United States (Lease). A random sample of faculty at each university was generated and stratified by gender and academic rank to ensure variability in the level of professional experience attained by the participants (Lease). Four hundred questionnaires were mailed out (Lease). Participants ranged in age from 27 to 71 years with a mean of 45.3 years (Lease). Sixty-four percent of the sample were female; 88% were Anglo-American, 5% were Asian-American, 3% were African-American, 4% were from other ethnic groups (Lease). Fifty-eight classified themselves as assistant professors, 33 as associate professors, and 35 as full professors; two were instructors, and three did not provide this information (Lease). There were no significant differences on

measures of stress or strain between male and female faculty or between new and more experienced faculty members (Lease). Role overload and avoidant coping were significant predictors of strain measures with hardiness and responsibility for home-centered tasks accounting for variance in some, but not all, of the strain measures (Lease). Results on the negative impact of role overload and avoidant coping on measures of personal strain are consistent with the literature and suggest the need for promoting different coping strategies in the academic workplace as well as working with faculty to help them prioritize and balance their daily workloads (Lease).

The Effort-Reward Imbalance (ERI) model of job stress has gained support in predicting strain, mainly in heterogeneous groups of employees. Kinman and Jones (2008) tested several hypotheses relating to the ERI model in a homogenous occupational group: academic employees working in universities in the United Kingdom. Eight hundred forty-four academic employees (59% male) completed questionnaires assessing the ERI components (i.e., efforts, rewards, and overcommitment), psychological and physical symptoms, job satisfaction, and leaving intentions (Kinman & Jones). Significant main effects of high efforts, low rewards, and high overcommitment were found for all strain outcomes (Kinman & Jones). Some evidence was found for the hypothesized two-way and three-way interactions (Kinman & Jones). The pattern and strength of the predictors of strain varied considerably, with the models accounting for between 14% and 43% variance in strain outcomes (Kinman & Jones). The validity of the ERI model as a predictor of a broad range of strain outcomes in academic employees in the United Kingdom has been confirmed (Kinman & Jones).

Richard and Krieshok (1989) used an interactive model of occupational stress, strain, and coping in assessing the relationships between male and female university faculty at three

occupational ranks (assistant, associate, and full professor). The hypothesis tested was that given equal amounts of stress, strain is moderated by coping (Richard & Krieshok). Eighty-three faculty members from a large midwestern university were administered the Occupational Stress Inventory (Richard & Krieshok). No significant differences were found between sex or occupational rank on measures of coping and role stressors (Richard & Krieshok). However, regression analysis indicated a significant interaction between sex and rank on predicted strain scores (Richard & Krieshok). Results indicated that occupational rank is an important variable when discussing the differential effects of stress, strain, and coping between men and women in a university setting (Richard & Krieshok).

Coping Among Faculty

Sanders's 1989 study on stress and methods of managing stress found the most reported method used to reduce stress was participation in exercise activities. Recommendations for coping with stress included: (1) Stress management classes should be in the required curriculum for all university students. (2) Methods should be implemented to relieve faculty members of responsibilities in addition to teaching such as advising, research, and publishing. (3) There should be ways for faculty members to make the administration of the universities aware of factors that are perceived as being stressful (Sanders).

Gmelch (1983) was involved in numerous faculty stress studies. His book *Coping with Stress* illustrated that as faculty continued in academic rank and increased years of teaching experience, not all areas of faculty stress declined. Specifically stress from time constraints and professional identity declines with age and experience (Gmelch).

Gender and gender roles have also been studied as a contributing factor of stress with regard to home life and responsibilities. For example, Stratford (2012) examined the struggles of tenure-track men and their work-life balance. Men tended to compartmentalize work and home lives, thereby improving time management (Stratford). Men also relied on their spouses to take on more parenting responsibilities, even if that conflicted with their own egalitarian philosophy (Stratford). The male respondents emphasized that the work-life conflict was more severe for female faculty members because of the perception that females are primary caregivers (Stratford). Despite their ability to compartmentalize work and home lives, many of the men in the study resorted to overextending themselves in ways that sacrificed their health as a means of coping with the stress (Stratford).

Perry and Chaney (1987) examined the coping styles of 309 nurse faculty from 30 baccalaureate degree nursing programs. Respondents read and responded to nine vignettes that contained situations illustrating the balancing of roles expected in academe (Perry & Chaney). Each vignette had three answers giving the respondent the choice of being a negotiator, priority setter, or superwoman (Perry & Chaney). Fourteen demographic questions were also included. The results revealed that the sample group most often chose negotiation as a coping pattern (Perry & Chaney). The majority (92%) negotiated with family or other support people to take over some of their roles at various times (Perry & Chaney). The hypothesis that there would be a significant relationship between preference for negotiation type coping and a well-developed social support system was supported (Perry & Chaney). The hypothesis that there would be a significant relationship between preference for priority type coping and the presence of a mentor was not supported (Perry & Chaney). Support systems, mentorship, and commitment to academic role in nursing were all examined (Perry & Chaney).

Perlberg and Kremer-Hayon's 1988 study, carried out in two phases, was conducted to examine the sources of stress and burnout among faculty developers and the coping strategies the faculty use. In the first phase in-depth interviews with individual faculty developers and their superiors were carried out in the United States, Canada, Great Britain, Western Europe, and Scandanavia (Perlberg & Kremer-Hayon). Another data source was group discussions in national and international workshops for faculty developers from different cultures (Perlberg & Kremer-Hayon). Based on the information gathered, a more structured in-depth interview was designed and carried out on a group of faculty developers during an International Conference on Improving University Teaching (Perlberg & Kremer-Hayon). The interviewees were 12 faculty members from 12 different countries covering most continents (Perlberg & Kremer-Hayon). The content-analysis of the protocolled interviews yielded several categories of reference: symptoms of stress and burnout, sources of stress and burnout, sources of satisfaction, isolation, coping strategies, and miscellaneous (Perlberg & Kremer-Hayon). No salient differences resulting from cultural attributes were observed (Perlberg & Kremer-Hayon). The results suggest that the stress and burnout syndromes and their sources are intellectual in nature (Perlberg & Kremer-Hayon).

In 1990 Ceccio reported survey results on the major factors or stressors related to teaching business and professional writing and the actual or potential coping strategies to reduce that stress. Business and professional writing faculty were asked "What one thing can be done to decrease stress among business and professional writing faculty?" (Ceccio). Six hundred seventy-four responses were obtained (Ceccio). The most frequently reported category for decreasing stress among business and professional writing faculty concerned course modifications (40.3%) (Ceccio). Within this category the majority suggested that the hiring of competent teaching assistants to help with grading and clerical duties would greatly relieve the

pressure and workload of critically evaluating every assignment (Ceccio). Professional strategies (32.6%) made up the second major group of responses (Ceccio). Over 12% of these respondents claimed that reduced teaching loads, committee assignments, and publishing expectations would help to reduce stress (Ceccio). Ten percent of respondents stated that increased academic status and respect would definitely decrease their stress (Ceccio). Associated issues included an upgrading of their departmental image, salary increases, and increased respect from colleagues (Ceccio). Two percent identified faculty self-discipline as a stress reducer (Ceccio). The specific coping mechanisms identified by these individuals included: belief in self, belief in the discipline, and performing as best as possible (Ceccio). Teaching supports was the third major category of responses (12.4%) (Ceccio). Almost 4% discussed the critical need for improved writing instruction long before students enter college (Ceccio). Similarly, a few individuals stated that a greater focus on writing was needed throughout the entire college curriculum (Ceccio). Using computers was identified as a stress reducer because of their potential to assist with grading, teach basic skills, or help students who need repetition to master basic skills (Ceccio). Personal strategies to decrease stress were cited as the fourth major category (Ceccio). These strategies included the development of outside interests, participation in regular exercise, and the use of other stress-management techniques such as relaxation exercises (Ceccio).

Dunn, Whelton, and Sharpe (2006) examined the roles of hassles, avoidant and problem-focused coping, and perceived social support as mediating the relationship between maladaptive perfectionism and psychological distress in a sample of university professors. Hassles and avoidant coping both partially mediated a strong association between maladaptive perfectionism and psychological distress (Dunn et al.). These results are discussed in terms of the need to better understand how coping styles and social support are associated with the negative impact of

perfectionism on the lives of university professors (Dunn et al.). The implications of these findings for counselling practice are also explored (Dunn et al.).

Minott (2010) reports on a study designed to understand (from the perspective of local teachers) what constitutes reflective teaching, negative in-school factors, and how teaching reflectively aids in coping with negative factors. In-school factors cited by teachers in the study are: heavy workload, mandated policies, disagreement with colleagues, and inadequate interpersonal relational skill among colleagues (Minott). By reflecting on these factors, the respondents arrived at a number of solutions to the challenge of heavy work load and employed both direct and indirect coping strategies in response to mandated policies and inadequate interpersonal relational skills among colleagues (Minott).

Summary

In conclusion there are differences among stress levels for faculty based on tenure status (Areekkuzhiyil, 2011; Barnes et al., 1998; Greene et al., 2008; Sanders, 1989). Gender is a variable that impacts faculty stress (Areekkuzhiyil, 2011; Barnes et al., 1998; Dey, 1990; Moore 2012; Schuldt & Totten, 2008) along with other variables such as online teaching assignments (Schuldt & Totten, 2008), discipline (Areekkuzhiyil, 2011; Barnes et al., 1998), and rank (Gmelch, 1983; Gmelch et al., 1986; The Chronicle of Higher Education, 2012; Thorsen, 1996; Wilson, 2012). These studies related to faculty stressors along with strains (Kinman & Jones, 2008; Lease, 1999; Richard & Krieshok, 1989), and coping (Ceccio, 1990; Dunn et al., 2006; Gmelch, 1983; Minott, 2010; Perlberg & Kremer-Hayon, 1988; Perry & Chaney, 1987; Sanders, 1989; Stratford, 2012) provide a foundation for other investigations of faculty stress, strain, and coping.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to determine if faculty members working through the tenure process within the last 3 years have a significantly different stress, strain, or coping level than those faculty members who have received tenure within the past 3 years. This study also determined the factors to which faculty members attribute stress and if stress levels varied significantly depending on demographic grouping. This chapter is a description of the research questions and the methodology with specific information on the survey instruments, data collection, sample size, data analyses, and survey procedures. Descriptions of the instruments used, as well as a list of variables, are further discussed.

To thoroughly understand the stress, strain, and coping levels of both tenure-track faculty members and recently tenured faculty members in selected institutions of higher education in Northeast Tennessee a nonexperimental quantitative research design was used. The primary purpose of quantitative research is to explain relationships between naturally occurring phenomena that exist. Quantitative research assumes that within the multiple perspectives that exist researchers can discover a single reality (McMillian & Schumacher, 2010). The knowledge that is generated through quantitative research focuses on measuring and describing phenomenon while maximizing objectivity. This research design is further subclassified as nonexperimental research. Nonexperimental research designs examine the relationship between different phenomena without any direct manipulation of conditions that are experienced.

Research Questions and Null Hypotheses

The following research questions and null hypotheses provided the focus for this study:

1. Is there a significant difference in stress, strain, and coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee?

   $Ho1_1$. There is no significant difference in stress levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

   $Ho1_2$. There is no significant difference in strain levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

   $Ho1_3$. There is no significant difference in coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

2. Is there a significant difference in stress, strain, or coping levels among faculty in different demographic groups?

   $Ho2_1$. There is no significant difference in stress levels among faculty in different gender groups.

   $Ho2_2$. There is no significant difference in strain levels among faculty in different gender groups.

   $Ho2_3$. There is no significant difference in coping levels among faculty in different gender groups.

$Ho2_4$. There is no significant difference in stress levels among faculty in different university type groups.

$Ho2_5$. There is no significant difference in strain levels among faculty in different university type groups.

$Ho2_6$. There is no significant difference in coping levels among faculty in different university type groups.

$Ho2_7$. There is no significant difference in stress levels among faculty in different rank groups.

$Ho2_8$. There is no significant difference in strain levels among faculty in different rank groups.

$Ho2_9$. There is no significant difference in coping levels among faculty in different rank groups.

$Ho2_{10}$. There is no significant difference in stress levels among faculty in different tenure status groups.

$Ho2_{11}$. There is no significant difference in strain levels among faculty in different tenure status groups.

$Ho2_{12}$. There is no significant difference in coping levels among faculty in different tenure status groups.

$Ho2_{13}$. There is no significant difference in stress levels among faculty in different discipline groups.

$Ho2_{14}$. There is no significant difference in strain levels among faculty in different discipline groups.

$Ho2_{15}$. There is no significant difference in coping levels among faculty in different discipline groups.

$Ho2_{16}$. There is no significant difference in stress levels among faculty in different age groups.

$Ho2_{17}$. There is no significant difference in strain among faculty in different age groups.

$Ho2_{18}$. There is no significant difference in coping levels among faculty in different age groups.

3. To what factors do pretenured faculty and recently tenured faculty members attribute stress and strain?

Instrumentation

The Occupational Stress Inventory-Revised is a previously established survey instrument that was used to collect data for this study. The revised edition of the OSI measures domains of occupational adjustment that include not only occupational stress, but also stress associated with the client's inability to cope effectively with stressors in the workplace and other settings. It also assesses coping resources available to the client to combat the effects of stressors and to alleviate strain. The Inventory is categorized into three questionnaires: Occupational Roles Questionnaire (ORQ) that includes Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, Responsibility, and Physical Environment; Personal Strain Questionnaire (PSQ) that includes Vocational Strain, Psychological Strain, Interpersonal Strain, and Physical Strain; and Personal Resources Questionnaire (PRQ) that includes Recreation, Self-Care, Social Support, and Rational/Cognitive Coping. Alpha coefficients for OSI-R total questionnaire scores were .88 for

ORQ, .93 for PSQ, and .89 for PRQ. Each of the 17 correlation coefficients listed in Table 1 was equal or greater than .63 and all were statistically significant. Overall 3 correlations were in the .60 to .69 range, 10 in the .70 to .79 range, 3 in the .80 to .89 range, and 1 in the .90 or above range (Osipow, 1998).

Table 1

Test-retest Correlations and Alpha Coefficients for the Occupational Stress Inventory-Revised (OSI-R) Scales (Osipow, 1998)

	Domain/Scale	R	Alpha-Coefficient
Stress	Occupational Role Questionnaire (ORQ)	0.61	0.88
	Role Overload (RO)	0.68	0.78
	Role Insufficiency (RI)	0.64	0.85
	Role Ambiguity (RA)	0.57	0.79
	Role Boundary (RB)	0.41	0.72
	Responsibility (R)	0.56	0.75
	Physical Environment (PE)	0.60	0.89
Strain	Personal Strain Questionnaire (PSQ)	0.74	0.93
	Vocational Strain (VS)	0.59	0.75
	Psychological Strain (PSY)	0.65	0.86
	Interpersonal Strain (IS)	0.55	0.75
	Physical Strain (PS)	0.67	0.85
Coping	Personal Resources Questionnaire (PRQ)	0.68	0.89
	Recreation (RE)	0.64	0.77
	Self-Care (SC)	0.39	0.70
	Social Support (SS)	0.52	0.88
	Rational/Cognitive (RC)	0.71	0.81

Six scales (i.e., Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, Responsibility, Physical Environment) measure occupational stress and make up the Occupational Roles Questionnaire (ORQ). Four scales (i.e., Vocational Strain, Psychological Strain, Interpersonal Strain, Physical Strain) measure psychological strain and make up the Personal Strain Questionnaire (PSQ). Four scales (i.e., Recreation, Self-Care, Social Support, Rational/Cognitive Coping) measure coping resources and make up the Personal Resources

Questionnaire (PRQ). One sample item was chosen from each questionnaire to be listed in Appendix A.

The survey instrument consisted of 140 Likert-type items and the demographic questions of gender and age. University type, rank, tenure status, and discipline appointment were added to the survey demographics. Age was categorized by decades. Tenure status was separated into the year in which tenure was received or expected. Discipline appointment was defined using the Holland, Johnston, and Asama (1994) classification scheme. This scheme divides all faculty into four categories: Investigative (biology and life sciences, economics, geography, math/statistics, physical sciences, finance, aeronautical engineering, civil engineering, chemical engineering, astronomy, earth science, pharmacy, anthropology, ethnic studies, geography, and sociology), Artistic (architecture, fine arts, foreign languages, English, music, speech, theater, and environmental design), Social (ethnic studies, home economics, humanities, library science, physical and health education, psychology, social sciences, education), and Enterprising (business, communications, computer/information science, law, public affairs, journalism, marketing, industrial engineering). Rank was classified as Assistant Professor, Associate Professor, and Professor. University type was delineated as public or private.

Sample

This study used a cluster sampling strategy to select the institutions for the study. Within the institutions selected, participants must be a current full-time employee. Participants must either have the rank of assistant professor, associate professor, or professor. In addition, they must have received tenure from the 2009-2010 through 2011-2012 academic years or had not received tenure as of the 2011-2012 academic year.

This cluster of institutions was chosen based on locale. As this study focuses on the northeast Tennessee region, only institutions in the northeast Tennessee region were chosen to participate. Both private and public institutions in this region were chosen. All institutions fall within a 100 square mile area.

For this study four regional colleges or universities were selected using a cluster sampling strategy. Two public and two private institutions of higher education in northeast Tennessee participated with a total population of 880 full-time faculty members. The demographic make-up of these institutions consists of total graduate and undergraduate student enrollment ranging from 1,096 to 12,413 and can be found on Table 2. Institution A is a private, not-for-profit, 4-year college with a small suburban campus and on-campus housing. It has obtained a Carnegie Classification of Baccalaureate Colleges-Diverse Fields. This institution offers a variety of associate's degrees, bachelor's degrees, and master's degrees. Institution B is a public, 2-year college with a fringe rural campus and no campus housing available. It has obtained a Carnegie Classification of Associate's—Public Rural—Serving Medium. This institution offers a variety of certificates and associate's degrees. Institution C is a private, not-for-profit, 4-year or above college with a midsize, suburban campus and on-campus housing. It has obtained a Carnegie Classification of Baccalaureate Colleges—Diverse Fields. This institution offers a variety of bachelor's and master's degrees. Institution D is a public, 4-year or above university with a small city campus and on-campus housing. It has obtained a Carnegie Classification of Doctoral and Research Universities. This institution offers a variety of bachelor's, master's, and doctoral degrees. Certificates are also offered. The total targeted population for all four universities is 225 tenure-track and 96 recently tenured faculty members.

Table 2

Participating Institution Demographics

	Institution A	Institution B	Institution C	Institution D
Type	Private	Public	Private	Public
Full Time Graduate and Undergraduate Student Enrollment (Fall 2011)	1,970	3,545	1,096	12,413
Total Full-Time Instructional Staff (Fall 2011)	122	120	67	571
Faculty Title (Fall 2011)				
Assistant Professor	44 (36.07%)	30 (25.0%)	20 (29.85%)	207 (36.25%)
Associate Professor	47 (38.52%)	43 (35.83%)	24 (35.82%)	149 (26.09%)
Professor	25 (20.49%)	12 (10.0%)	23 (34.33%)	131 (22.94%)
Faculty Rank Total (Fall 2011)				
Tenure-Track	35 (28.69%)	13 (10.83%)	22 (32.84%)	155 (27.15%)
Tenured	77 (63.11%)	44 (36.67%)	41 (61.19%)	295 (51.66%)
Not Tenure-Track	10 (8.20%)	63 (52.50%)	4 (5.97%)	121 (21.19%)
Full-Time Instructional Staff Faculty Gender (Fall 2011)				
Male	59 (48.36%)	58 (48.33%)	34 (50.75%)	322 (56.39%)
Female	63 (51.64%)	62 (51.67%)	33 (49.25%)	249 (43.61%)

Each participant was a current full-time employee at one of the four selected institutions. Participants must either have the rank of assistant professor, associate professor, or professor. In

addition, they must have received tenure from the 2009-2010 through 2011-2012 academic years or had not received tenure as of the 2011-2012 academic year. There were 122 participants from Institution A. In the year 2010, 81 faculty members received tenure. In 2011, 77 faculty members received tenure. In 2012, 76 faculty members received tenure. There are currently 13 faculty members on tenure-track. Five of these faculty members will go up for tenure in 2013. Seven of these faculty members will go up for tenure in 2014. One of these faculty members will go up for tenure in 2015. There were 20 participants from Institution B. In the year 2010, three faculty members received tenure. In 2011, two faculty members received tenure. In 2012, two faculty members received tenure. There are currently 13 faculty members on tenure-track. Seven of these faculty members will go up for tenure in 2013. Five of these faculty members will go up for tenure in 2014. Six of these faculty members will go up for tenure in 2015. There were 28 participants from Institution C. In the year 2010, one faculty member received tenure. In 2011, no faculty members received tenure. In 2012, five faculty members received tenure. There are currently 22 faculty members on tenure-track. Five of these faculty members will go up for tenure in 2013. Two of these faculty members will go up for tenure in 2014. One of these faculty members will go up for tenure in 2015. There were 238 participants from Institution D. In the year 2010, 21 faculty members received tenure. In 2011, 25 faculty members received tenure. In 2012, 37 faculty members received tenure. There are currently 155 faculty members on tenure-track. It was not disclosed to this researcher when these faculty members would go up for tenure.

Data Collection

The senior academic officer responsible for faculty (Provost/Dean of Faculty Affairs/Vice President for Academic Affairs) at each institution was contacted for research

approval. Once each institution agreed to participate, the senior academic officer was sent an invitation email including a link to the OSI-R survey to be forwarded to participants (Appendix B). The email invitation and survey link were sent to all faculty members with the rank of assistant professor, associate professor, or professor who had received tenure from 2009-2010 through 2011-2012 academic years or had not received tenure as of the 2011-2012 academic year.

An electronic survey tool, Survey Monkey, was used to convert the OSI-R item booklet and answer form into an electronic format. This tool creates a customized website link visible only to participants given the link. This link was included in the invitation email sent to each institution. The survey was open 2 weeks for each institution to have enough time to participate.

An IRB exemption approval from East Tennessee State University was granted to this researcher in accordance with 45 CFR 46. 101(b)(2) with the understanding that this project will be conducted in full accordance with all applicable sections of the IRB policies. IRB approval letters were shared with all participating institutions while gaining permission to research their current faculty. All responses were confidential and the demographic information collected did not reveal the participants in the study.

Data Analysis

Data from the selected institutions of higher education were compiled into a Statistical Package for Social Sciences (SPSS) Version 16.0 data file. SPSS was used for all statistical analysis in this study. The electronic survey tool Survey Monkey integrated the data collected into a format compatible with SPSS. Only surveys completed in full were included in data analysis. Incomplete surveys were deleted from the database.

Answers to demographic questions were completed using drop-down menus containing answer options or by short answer open fields. OSI-R questions were answered using a Likert scale model. Answers of "most of the time" were coded with 5, "usually" with 4, "often" with 3, "occasionally" with 2, and "rarely or never" with 1. Exceptions include numbers that were coded in reverse: "most of the time" with 1, "usually" with 2, "often" with 3, "occasionally" with 4, and "rarely or never" with 5.

Research question 1 and null hypotheses $1_{1\text{-}3}$ were analyzed using a series of one-way analyses of variance (ANOVAs) to compare the stress, strain, and coping levels of recently tenured and nontenured faculty. All data were analyzed at the .05 level of significance.

Research question 2 and null hypotheses $2_{1\text{-}6}$ were analyzed using series of one-way multivariate analyses of variance (MANOVAs) to compare the stress, strain, and coping levels of recently tenured and nontenured faculty in different demographic groups. All data were analyzed at the .05 level of significance.

Research question 3 was analyzed using self-reported stress factors obtained from the OSI-R score report.

Summary

Chapter 3 reported the methodology and procedures for conducting this study. After a brief introduction, a description of the research design, selection of the population, research questions and null hypotheses, the data collection procedures, survey instruments, survey reliability, and the consequential data analysis procedures were defined. The results of this study are presented in Chapter 4.

CHAPTER 4

DATA ANALYSIS

Aging faculty population in a place like Northeast Tennessee combined with talented people leaving the area is common in rural parts of the United States. There is a need to better understand the occupational factors within the faculty roles in order to better recruit and retain new faculty in this region. The purpose of this study was to compare the stress, strain, and coping levels between pretenured faculty and recently tenured faculty in institutions of higher education in Northeast Tennessee.

In this chapter results are provided that answer three research questions. An electronic survey with four sections was used to capture data. The first section included six demographic questions. A five-point Likert-type scale (Occupational Stress Inventory-Revised) was used on the remaining sections to assess varying levels of Occupational Stress, Psychological Strain, and Coping Resources. All full-time, tenure-track/recently tenured faculty members at the four participating institutions totaled 408. One hundred eleven responses were captured; however, only 92 were used in the analysis of data. There were 19 ineligible responses that were 19 incomplete surveys.

Demographics

The demographic make-up of the participants included 39 (42.4%) tenured faculty and 53 (57.6%) tenure-track faculty. Participant rank included: Assistant Professor 54 (58.70%), Associate Professor 29 (31.50%), and Professor 9 (9.80%). Gender demographics included 48 (52.20%) female and 44 (47.80%) male participants. Ages of participants varied from 29 to 83.

Participants' discipline appointments included: Investigative 23 (25%), Artistic 16 (17.40%), Social 45 (48.90%), and Enterprising 8 (8.70%). Seventy-three participants (79.30%) were employed at public institutions, and 19 participants (20.70%) were employed at private institutions.

Analysis of Research Questions

Research Question #1

Is there a significant difference in stress, strain, and coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee?

$Ho1_1$. There is no significant difference in stress levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

$Ho1_2$. There is no significant difference in strain levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

$Ho1_3$. There is no significant difference in coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

Multiple one-way analyses of variance (ANOVAs) were conducted to analyze the stress, strain, and coping levels in tenure-track and recently tenured faculty members. The independent variable was tenure status (tenured in 2011, tenured in 2012, tenured in 2013, up for tenure in 2014, up for tenure in 2015, up for tenure in 2016). The dependent variables for stress consisted

of: Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), and Physical Environment (PE) levels as scored by the OSI-R. The dependent variables for strain consisted of: Vocational Strain (VS), Psychological Strain (PSY), Interpersonal Strain (IS), and Physical Strain (PHS) levels as scored by the OSI-R. The dependent variables for coping consisted of: Recreation (RE), Self-Care (SC), Social Support (SS), and Rational/Cognitive Coping (RC) levels as scored by the OSI-R.

The ANOVA performed for tenure status and Role Overload was not significant, $F(5, 86) = 1.18$, $p = 0.33$. The strength of the relationship between tenure status RO as assessed by η^2 was medium (0.06). The ANOVA performed for tenure status and Role Insufficiency was not significant, $F(5, 86) = 0.39$, $p = 0.85$. The strength of the relationship between tenure status and RI as assessed by η^2 was small (0.02). The ANOVA performed for tenure status and Role Ambiguity was not significant, $F(5, 86) = 0.99$, $p = 0.43$. The strength of the relationship between tenure status and RA as assessed by η^2 was small (0.05). The ANOVA performed for tenure status and Role Boundary was not significant, $F(5, 86) = 1.22$, $p = 0.31$. The strength of the relationship between tenure status and RB as assessed by η^2 was medium (0.07). The ANOVA performed for tenure status and Responsibility was not significant, $F(5, 86) = 0.15$, $p = 0.98$. The strength of the relationship between tenure status and R as assessed by η^2 was small (0.01). The ANOVA performed for tenure status and Physical Environment was not significant, $F(5, 86) = 0.83$, $p = 0.53$. The strength of the relationship between tenure status and PE as assessed by η^2 was small (0.05). Therefore, null hypothesis 1_1 was not rejected. The 95% confidence intervals for the pair-wise differences, as well as the means and standard deviations for these six variables are reported in Table 3.

Table 3

Descriptive Statistics and Analysis of Variance Results for OSI-R Scale for Stress (ORQ)

Variable	Mean	Standard Deviation	Analysis of Variance F	p-value
Role Overload (RO)	31.92	7.56	1.18	0.38
Tenured in 2011	30.73	8.72		
Tenured in 2012	29.07	7.45		
Tenured in 2013	31.62	7.18		
Up in 2014	31.09	8.44		
Up in 2015	31.50	6.36		
Up in 2016	34.40	7.31		
Role Insufficiency (RI)	22.45	7.40	0.40	0.85
Tenured in 2011	21.27	6.36		
Tenured in 2012	20.67	5.92		
Tenured in 2013	23.38	9.53		
Up in 2014	22.00	7.25		
Up in 2015	24.00	8.59		
Up in 2016	22.90	7.30		
Role Ambiguity (RA)	22.28	7.62	0.99	0.43
Tenured in 2011	19.64	4.86		
Tenured in 2012	19.67	5.68		
Tenured in 2013	22.08	9.49		
Up in 2014	23.18	9.16		
Up in 2015	23.00	7.07		
Up in 2016	24.03	7.98		
Role Boundary (RB)	22.24	7.19	1.22	0.31
Tenured in 2011	22.09	7.96		
Tenured in 2012	18.80	6.06		
Tenured in 2013	21.08	6.42		
Up in 2014	22.55	7.50		
Up in 2015	22.83	6.93		
Up in 2016	24.17	7.56		

Table 3 (continued)

Responsibility (R)	26.26	7.46	0.15	0.99
Tenured in 2011	26.82	7.21		
Tenured in 2012	25.87	6.07		
Tenured in 2013	25.08	7.96		
Up in 2014	27.18	10.97		
Up in 2015	25.67	6.77		
Up in 2016	26.70	7.22		
Physical Environment (PE)	16.29	5.40	0.83	0.53
Tenured in 2011	16.55	5.37		
Tenured in 2012	17.67	5.49		
Tenured in 2013	14.69	3.22		
Up in 2014	14.45	4.18		
Up in 2015	17.67	6.80		
Up in 2016	16.33	5.91		

The ANOVA performed for tenure status and Vocational Strain was not significant, $F(5, 86) = 0.67$, $p = 0.65$. The strength of the relationship between tenure status and VS as assessed by η^2 was small (0.04). The ANOVA performed for tenure status and Psychological Strain was not significant, $F(5, 86) = 2.16$, $p = 0.07$. The strength of the relationship between tenure status and PSY as assessed by η^2 was medium (0.11). The ANOVA performed for tenure status and Interpersonal Strain was not significant, $F(5, 86) = 1.33$, $p = 0.26$. The strength of the relationship between tenure status and IS as assessed by η^2 was small (0.07). The ANOVA performed for tenure status and Physical Strain was significant, $F(5, 86) = 3.13$, $p = 0.01$. Therefore, null hypothesis 1_2 was rejected. The strength of the relationship between tenure status and PHS as assessed by η^2 was large (0.15). Because the overall F test was significant, post hoc multiple comparisons were conducted to evaluate the pairwise difference between the means of

the two groups. A Tukey procedure was selected for the multiple comparisons because equal variances were assumed. Those up for tenure in 2016 had a significantly higher mean (26.53) than those tenured in 2011 (18.55), $p = 0.04$. The 95% confidence intervals for the pair-wise differences, as well as the means and standard deviations for these four variables are reported on Table 4.

Table 4

Descriptive Statistics and Analysis of Variance Results for OSI-R Scale for Strain (PSQ)

Variable	Mean	Standard Deviation	Analysis of Variance F	p-value
Vocational Strain (VS)	18.89	5.64	0.67	0.65
Tenured in 2011	18.18	18.18		
Tenured in 2012	16.80	16.80		
Tenured in 2013	18.85	18.85		
Up in 2014	19.00	19.00		
Up in 2015	20.17	20.17		
Up in 2016	19.67	19.67		
Psychological Strain (PSY)	22.10	8.20	2.16	0.07
Tenured in 2011	20.82	4.73		
Tenured in 2012	17.47	5.32		
Tenured in 2013	20.15	8.14		
Up in 2014	21.91	8.40		
Up in 2015	25.08	11.82		
Up in 2016	24.60	7.84		
Interpersonal Strain (IS)	20.92	6.20	1.33	0.26
Tenured in 2011	19.82	4.98		
Tenured in 2012	18.80	4.55		
Tenured in 2013	19.00	7.14		
Up in 2014	20.73	7.82		
Up in 2015	22.58	5.88		
Up in 2016	22.63	6.16		
Physical Strain (PHS)	22.85	8.07	3.13	0.01
Tenured in 2011	18.55	5.26		
Tenured in 2012	20.67	8.82		
Tenured in 2013	20.62	8.44		
Up in 2014	20.00	6.91		
Up in 2015	25.33	8.40		
Up in 2016	26.53	7.27		

The ANOVA performed for tenure status and Recreation was significant, $F(5, 86) = 2.58$, $p = 0.03$. Therefore, null hypothesis 1_3 was rejected. The strength of the relationship between tenure status and RE as assessed by η^2 was medium (0.13). Because the overall *F* test was significant, post hoc multiple comparisons were conducted to evaluate the pairwise difference between the means of the two groups. A Tukey procedure was selected for the multiple comparisons because equal variances were assumed. Those up for tenure in 2016 had a significantly lower mean (20.60) than those tenured in 2011 (29.18), $p = 0.02$. The ANOVA performed for tenure status and Self-Care was not significant, $F(5, 86) = 1.38$, $p = 0.24$. The strength of the relationship between tenure status and SC as assessed by η^2 was small (0.07). The ANOVA performed for tenure status and Social Support was not significant, $F(5, 86) = 0.84$, $p = 0.52$. The strength of the relationship between tenure status and SS as assessed by η^2 was small (0.05). The ANOVA performed for tenure status and Rational/Cognitive Coping was not significant, $F(5, 86) = 1.94$, $p = 0.10$. The strength of the relationship between tenure status and RC as assessed by η^2 was medium (0.10). The 95% confidence intervals for the pair-wise differences, as well as the means and standard deviations for these four variables are reported in Table 5.

Table 5

Descriptive Statistics and Analysis of Variance Results for OSI-R Scale for Coping (PRQ)

Variable	Mean	Standard Deviation	Analysis of Variance F	p-value
Recreation (RE)	22.92	7.76	2.58	0.03
Tenured in 2011	29.18	7.29		
Tenured in 2012	24.93	7.70		
Tenured in 2013	22.08	9.62		
Up in 2014	23.45	6.85		
Up in 2015	20.92	7.09		
Up in 2016	20.60	6.63		
Self-Care (SC)	27.95	7.55	1.38	0.24
Tenured in 2011	31.64	8.42		
Tenured in 2012	26.00	7.39		
Tenured in 2013	29.23	10.35		
Up in 2014	29.73	5.85		
Up in 2015	28.83	6.69		
Up in 2016	26.00	6.45		
Social Support (SS)	40.88	8.35	0.84	0.52
Tenured in 2011	39.64	9.45		
Tenured in 2012	43.60	5.38		
Tenured in 2013	42.15	9.49		
Up in 2014	42.82	6.31		
Up in 2015	38.75	9.52		
Up in 2016	39.57	8.85		
Rational/Cognitive Coping (RC)	34.86	6.83	1.94	0.10
Tenured in 2011	36.45	8.03		
Tenured in 2012	35.80	6.00		
Tenured in 2013	36.62	6.56		
Up in 2014	38.36	7.37		
Up in 2015	32.00	6.78		
Up in 2016	32.90	6.17		

Research Question #2

Is there a significant difference in stress, strain, or coping levels among faculty in different demographic groups?

$Ho2_1$. There is no significant difference in stress levels among faculty in different gender groups.

$Ho2_2$. There is no significant difference in strain levels among faculty in different gender groups.

$Ho2_3$. There is no significant difference in coping levels among faculty in different gender groups.

$Ho2_4$. There is no significant difference in stress levels among faculty in different university type groups.

$Ho2_5$. There is no significant difference in strain levels among faculty in different university type groups.

$Ho2_6$. There is no significant difference in coping levels among faculty in different university type groups.

$Ho2_7$. There is no significant difference in stress levels among faculty in different rank groups.

$Ho2_8$. There is no significant difference in strain levels among faculty in different rank groups.

$Ho2_9$. There is no significant difference in coping levels among faculty in different rank groups.

$Ho2_{10}$. There is no significant difference in stress levels among faculty in different tenure status groups.

$Ho2_{11}$. There is no significant difference in strain levels among faculty in different tenure status groups.

$Ho2_{12}$. There is no significant difference in coping levels among faculty in different tenure status groups.

$Ho2_{13}$. There is no significant difference in stress levels among faculty in different discipline groups.

$Ho2_{14}$. There is no significant difference in strain levels among faculty in different discipline groups.

$Ho2_{15}$. There is no significant difference in coping levels among faculty in different discipline groups.

$Ho2_{16}$. There is no significant difference in stress levels among faculty in different age groups.

$Ho2_{17}$. There is no significant difference in strain among faculty in different age groups.

$Ho2_{18}$. There is no significant difference in coping levels among faculty in different age groups.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of gender on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were not found among gender groups on the dependent measures, Wilks's $\Lambda = 0.98$, $F(3, 88) = 0.54$, $p = 0.66$. The multivariate η^2 based on Wilks's Λ was small, 0.02. Table 4 contains the means and the standard deviations on the dependent variables for the gender groups. Analyses of variance (ANOVAs) on the

dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the 0.025 level. The ANOVA on the Stress (ORQ) score was not significant, $F(1,90) = 0.37$, $p = 0.55$, $\eta^2 = 0.004$. Therefore, null hypothesis 2_1 was not rejected. The ANOVA on the Strain (PSQ) score was not significant, $F(1, 90) = 0.001$, $p = 0.97$, $\eta^2 = 0.92$. Therefore, null hypothesis 2_2 was not rejected. The ANOVA on the Coping (PRQ) score was not significant, $F(1, 90) = 0.58$, $p = 0.45$, $\eta^2 = 0.006$. Therefore, null hypothesis 2_3 was not rejected. Post hoc tests were not performed for gender because there were fewer than three groups.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of university type on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were not found among university type on the dependent measures, Wilks's $\Lambda = 0.97$, $F(3, 88) = 0.79$, $p = 0.50$. The multivariate η^2 based on Wilks's Λ was small, 0.03. Table 4 contains the means and the standard deviations on the dependent variables for the university type groups. Analyses of variance (ANOVAs) on the dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the 0.025 level. The ANOVA on the Stress (ORQ) score was not significant, $F(1,90) = 0.06$, $p = 0.81$, $\eta^2 = 0.001$. Therefore, null hypothesis 2_4 was not rejected. The ANOVA on the Strain (PSQ) score was not significant, $F(1, 90) = 1.33$, $p = 0.25$, $\eta^2 = 0.02$. Therefore, null hypothesis 2_5 was not rejected. The ANOVA on the Coping (PRQ) score was not significant, $F(1, 90) = 1.57$, $p = 0.21$, $\eta^2 = 0.02$. Therefore, null hypothesis 2_6 was not rejected. Post hoc tests were not performed for university type because there were fewer than three groups.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of rank on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were not found among rank groups on the dependent measures, Wilks's $\Lambda = 0.86$, $F(6, 174) = 2.32$, $p = 0.04$. The multivariate η^2 based on Wilks's Λ was medium, 0.07. Table 4 contains the means and the standard deviations on the dependent variables for the rank groups. Analyses of variance (ANOVAs) on the dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the 0.0125 level. The ANOVA on the Stress (ORQ) score was not significant, $F(2,89) = 0.22$, $p = 0.80$, $\eta^2 = 0.005$. Therefore, null hypothesis 2_7 was not rejected. The ANOVA on the Strain (PSQ) score was not significant, $F(2, 89) = 1.04$, $p = 0.36$, $\eta^2 = 0.02$. Therefore, null hypothesis 2_8 was not rejected. The ANOVA on the Coping (PRQ) score was not significant, $F(2, 89) = 4.65$, $p = 0.012$, $\eta^2 = 0.10$. Therefore, null hypothesis 2_9 was not rejected.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of tenure status on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were not found among tenure status groups on the dependent measures, Wilks's $\Lambda = 0.85$, $F(15, 232.29) = 0.93$, $p = 0.54$. The multivariate η^2 based on Wilks's Λ was small, 0.05. Table 4 contains the means and the standard deviations on the dependent variables for the tenure status groups. Analyses of variance (ANOVAs) on the dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the 0.00625 level. The ANOVA on the Stress (ORQ) score was not significant, $F(5,86) = 0.73$, $p = 0.60$, $\eta^2 = 0.04$. Therefore, null hypothesis 2_{10} was not rejected. The ANOVA on the Strain (PSQ) score was not

significant, $F(5, 86) = 2.09$, $p = 0.08$, $\eta^2 = 0.11$. Therefore, null hypothesis 2_{11} was not rejected. The ANOVA on the Coping (PRQ) score was not significant, $F(5, 86) = 1.67$, $p = 0.15$, $\eta^2 = 0.09$. Therefore, null hypothesis 2_{12} was not rejected.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of discipline on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were not found among discipline groups on the dependent measures, Wilks's $\Lambda = 0.97$, $F(9, 209.45) = 0.29$, $p = 0.98$. The multivariate η^2 based on Wilks's Λ was small, 0.01. Table 4 contains the means and the standard deviations on the dependent variables for the discipline groups. Analyses of variance (ANOVAs) on the dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the 0.0125 level. The ANOVA on the Stress (ORQ) score was not significant, $F(3,88) = 0.25$, $p = 0.86$, $\eta^2 = 0.008$. Therefore, null hypothesis 2_{13} was not rejected. The ANOVA on the Strain (PSQ) score was not significant, $F(3, 88) = 0.42$, $p = 0.74$, $\eta^2 = 0.01$. Therefore, null hypothesis 2_{14} was not rejected. The ANOVA on the Coping (PRQ) score was not significant, $F(3, 88) = 0.60$, $p = 0.62$, $\eta^2 = 0.02$. Therefore, null hypothesis 2_{15} was not rejected.

Multiple one-way multivariate analyses of variance (MANOVAs) were conducted to determine the effect of age on the three dependent variables, the Stress (ORQ), Strain (PSQ), and Coping (PRQ) scores on the OSI-R. Significant differences were found among age groups on the dependent measures, Wilks's $\Lambda = 0.73$, $F(15, 232.29) = 1.90$, $p = 0.02$. The multivariate η^2 based on Wilks's Λ was medium, 0.10. Table 6 contains the means and the standard deviations on the dependent variables for the age groups. Analyses of variance (ANOVAs) on the dependent variables were conducted as follow-up tests to the MANOVA. Using the Bonferroni method,

each ANOVA was tested at the 0.0071 level. The ANOVA on the Stress (ORQ) score was not significant, $F(5,86) = 2.79$, $p = 0.022$, $\eta^2 = 0.14$. Therefore, null hypothesis 2_{16} was not rejected. The ANOVA on the Strain (PSQ) score was significant, $F(5, 86) = 3.54$, $p = 0.006$, $\eta^2 = 0.17$. Therefore, null hypothesis 2_{17} was rejected. The ANOVA on the Coping (PRQ) score was significant, $F(5, 86) = 4.41$, $p = 0.001$, $\eta^2 = 0.20$. Therefore, null hypothesis 2_{18} was rejected. Post hoc tests were not performed for age because at least one group has fewer than two cases.

Table 6

Descriptive Statistics on the Dependent Variable for Age Groups

Dependent Variable	Age Group	Mean	Standard Deviation
Stress (ORQ)	20-29	94.00	-
	30-39	144.50	27.61
	40-49	142.09	27.11
	50-59	150.71	23.81
	60-69	122.00	43.65
	70-79	-	-
	80-89	85.00	-
Strain (PSQ)	20-29	43.00	-
	30-39	88.72	24.57
	40-49	85.73	21.80
	50-59	91.76	21.99
	60-69	63.73	24.84
	70-79	-	-
	80-89	47.00	-
Coping (PRQ)	20-29	147.00	-
	30-39	119.83	21.03
	40-49	124.27	22.99
	50-59	125.52	14.45
	60-69	149.64	28.84
	70-79	-	-
	80-89	23.23	-

Research Question #3

To what factors do pretenured faculty and recently tenured faculty members attribute stress and strain?

A mean was calculated on each dependent variable and listed on Table 3. The variables with the two highest means were both components of the Stress (ORQ) scale. Role Overload (RO) had the highest mean of 31.92. Responsibility (R) had the next highest with 26.26. The variable with the third highest mean was a component of the Strain (PSQ) scale. Interpersonal Strain (IS) had a mean of 20.92.

Summary

In this chapter data obtained from 92 full-time faculty members at four participating institutions were presented and analyzed. There were three research questions and 21 null hypotheses. All data were collected through an online survey distributed via email. A significant difference was found between Physical Strain levels according to tenure status. With regards to the Strain (PSQ) variable, Physical Strain (PHS), those up for tenure in 2016 had a significantly higher mean than those tenured in 2011. The data also indicated that there was a significant difference found between the Coping (PRQ) variable Recreation levels according to tenure status. In regards to Recreation (RE) those up for tenure in 2016 had a significantly lower mean than those tenured in 2011.

A significant difference was found between Strain (PSQ) levels according to age groups, with the youngest and oldest faculty members feeling less strain. The data also indicated that there was a significant difference between Coping (PRQ) levels according to age groups, with the oldest group being lowest. These findings indicate that for the full-time faculty members at

the four participating institutions age significantly affects Strain and Coping levels. However, Post Hoc tests were not performed as at least one age group had fewer than two cases.

The variables with the two highest means were both components of the Stress (ORQ) scale. Role Overload (RO) had the highest mean of 31.92. Responsibility (R) had the next highest with 26.26. The variable with the third highest mean was a component of the Strain (PSQ) scale. Interpersonal Strain (IS) had a mean of 20.92.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to provide the findings of the study in relation to the literature review, succinct answers to the research questions that guided the study, and recommendations for institutional practices and future research. The previous four chapters described the theoretical and practical landscape for the coping, stress, and strain levels of tenure-track and recently tenured faculty members in selected institutions of higher education in northeast Tennessee. Their OSI-R scores as presented in Chapter 4 was the primary focus of the study. It is through these scores that university faculty members, staff, and administrators can increase awareness of coping, stress, and strain levels and develop strategies to create campus environments that are more welcoming, affirming, supportive, and respectful of all faculty members.

Data from this study were consistent with the literature findings related to faculty members' stress, strain, and coping. As an example, Greene et al. (2008) found that as pretenured faculty become better at balancing and negotiating their workload, they become less and less satisfied with their profession. These findings with regard to tenure status are disturbing because new faculty begin their careers with idealistic expectations and high enthusiasm only to become dissatisfied, stressed, and often physically ill. This study adds to the body of literature by providing a context for understanding stress, strain, and coping for tenure-track and recently tenured faculty members at selected institutions of higher education in northeast Tennessee.

From personal curiosity and concerns regarding the well-being of faculty members, my objective was to discover the factors involved with stress, strain, and coping. Areekkuzhiyil

(2011) found that it is difficult to conduct a study of occupational stress among tenured and untenured faculty members without considering the many complex factors that contribute to the workplace environment.

The purpose of the study was to compare the stress, strain, and coping levels between pretenured faculty and recently tenured faculty in institutions of higher education in Northeast Tennessee. The study was conducted using data collected through an online survey of 92 full-time faculty members at four selected institutions of higher education.

The significance of the study is to contribute valuable information to governing bodies and policymakers, such as the Tennessee Board of Regents, as these organizations consider the requirements of tenure and the tenure process. The research findings may also be helpful to higher education administrators as they oversee work performance and faculty support programs.

The secondary objective was to fill the gap and enhance the body of literature concerning the stress, strain, and coping level of tenure-track and recently tenured faculty members in selected institutions of higher education in northeast Tennessee. Studies have been performed on faculty stress, strain, and coping; however, most samples were gathered from large universities. This study looks at a cross section of higher education institutions, including small and large, public and private institutions in a rural region where few faculty stress, strain, and coping studies have been reported. To that end, I sought to answer the following research questions:

1. Is there a significant difference in stress, strain, and coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee?

$Ho1_1$. There is no significant difference in stress levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

$Ho1_2$. There is no significant difference in strain levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

$Ho1_3$. There is no significant difference in coping levels between pretenured faculty and recently tenured faculty in selected institutions of higher education in Northeast Tennessee.

2. Is there a significant difference in stress, strain, or coping levels among faculty in different demographic groups?

$Ho2_1$. There is no significant difference in stress levels among faculty in different gender groups.

$Ho2_{2.}$ There is no significant difference in strain levels among faculty in different gender groups.

$Ho2_{3.}$ There is no significant difference in coping levels among faculty in different gender groups.

$Ho2_4$. There is no significant difference in stress levels among faculty in different university type groups.

$Ho2_5$. There is no significant difference in strain levels among faculty in different university type groups.

$Ho2_6$. There is no significant difference in coping levels among faculty in different university type groups.

$Ho2_7$. There is no significant difference in stress levels among faculty in different rank groups.

$Ho2_8$. There is no significant difference in strain levels among faculty in different rank groups.

$Ho2_9$. There is no significant difference in coping levels among faculty in different rank groups.

$Ho2_{10}$. There is no significant difference in stress levels among faculty in different tenure status groups.

$Ho2_{11}$. There is no significant difference in strain levels among faculty in different tenure status groups.

$Ho2_{12}$. There is no significant difference in coping levels among faculty in different tenure status groups.

$Ho2_{13}$. There is no significant difference in stress levels among faculty in different discipline groups.

$Ho2_{14}$. There is no significant difference in strain levels among faculty in different discipline groups.

$Ho2_{15}$. There is no significant difference in coping levels among faculty in different discipline groups.

$Ho2_{16}$. There is no significant difference in stress levels among faculty in different age groups.

$Ho2_{17}$. There is no significant difference in strain among faculty in different age groups.

$Ho2_{18}$. There is no significant difference in coping levels among faculty in different age groups.

3. To what factors do pretenured faculty and recently tenured faculty members attribute stress and strain?

The challenge of this quantitative research investigation was to answer these questions by means of a nonexperimental approach. The challenge of nonexperimental research was to successfully collect, analyze, and interpret data that illustrated the stress, strain, and coping levels of tenure-track and recently tenured faculty members in selected institutions of higher education in northeast Tennessee. Every aspect took longer than I originally thought especially finding 92 full-time faculty members to agree to participate in the study.

Nonexperimental research designs examine the relationship between different phenomena without any direct manipulation of conditions that are experienced. The advantage of a nonexperimental approach was the ability to immerse myself in research without imposing on faculty members' already full schedules, to share their positive and negative experiences, and most importantly, to hear their perspectives of higher education stress, strain, and coping.

Conducting the investigation through the use of quantitative statistics was challenging because it focused on measuring and describing phenomenon while maximizing objectivity. The primary purpose of quantitative research is to explain relationships between naturally occurring phenomena that exist in the world today. Quantitative research assumes that within the multiple perspectives that exist in the world, researchers can discover a single reality (McMillian & Schumacher, 2010).

In this chapter several findings are presented and discussed in relation to this study, previous research, and theory. Conclusions drawn from the findings and research questions are presented. Finally, recommendations for research and improved practices conclude the study.

Research Findings with Comparisons to the Literature

For purposes of organization and in accordance with the research questions, this section contains the following categories: (a) tenure-track and recently tenured; (b) demographic differences; and (c) factors of stress and strain. Each category presents the major research findings of the study together with brief comparisons with the literature. It is my intent to describe what was learned from this investigation and how the findings compared to existing literature concerning stress, strain, and coping levels of tenure-track and recently tenured faculty members at selected institutions of higher education in northeast Tennessee. Although these findings are specific to faculty members at four institutions of higher education in northeast Tennessee, their implications might be considered for other colleges and universities in this region of the country.

Tenure-Track and Recently Tenured

Tenure status was a major theme throughout this study. The literature was extensive regarding tenure status and stress, strain, and coping. In 2008 Greene et al. found that as pretenured faculty become better at balancing and negotiating their workload, they become less and less satisfied with their profession. Another inquiry into the relationship between tenure and stress supported these aforementioned results and concluded that the organizational stress level of faculty members depends on gender, type of organization, and length of experience

(Areekkuzhiyil, 2011). Areekkuzhiyil found that it is difficult to conduct a study of occupational stress among tenured and untenured faculty members without considering the many complex factors that contribute to the workplace environment.

The literature suggests that new faculty often become dissatisfied, stressed, and often physically ill even though they began their careers with idealistic expectations and high enthusiasm (Greene et al., 2008). University administrators should provide faculty and staff with better occupational stress reduction methods (Dey, 1990; Sanders, 1989). Some universities are recognizing issues with occupational stress in their institutions and taking steps to address these issues. For example, Ohio State University created alternative paths for associate professors to be promoted to full professors (The Chronicle of Higher Education, 2012; Wilson, 2012).

The participants in this study who were up for tenure in 2016 reported significantly higher Physical Strain levels than those tenured in 2011. This implies that those up for tenure in 2016 may report more frequent worries about their health as well as a number of physical symptoms. They may also report unplanned weight change, overuse of alcohol, disturbances of sleeping patterns, or feeling lethargic or apathetic. The data also indicated that those up for tenure in 2016 had a significantly lower Recreation score than those tenured in 2011. This implies that those tenured in 2011 take more advantage of recreational or leisure time and engage in activities that they find relaxing and satisfying.

Demographic Differences

Demographics were another major theme throughout this study. The literature was extensive regarding various demographics and stress, strain, and coping. For example, Thorsen (1996) found that rank rather than tenure status appeared to be more significantly related to

perceived stress. In a 2011-12 study, Harvard's Collaborative on Academic Careers in Higher Education found that associate professors are "some of the unhappiest people in academe" (The Chronicle of Higher Education, 2012; Wilson, 2012).

The literature has many suggestions regarding demographics and the study of stress, strain, and coping. In 1986 Gmelch, Wilke, and Lovrich Jr. found significant differences in the areas of tenure, rank, age, gender, and marital status. Results from Dey's 1990 study indicate that different groups of tenured faculty perceive varying levels and dimensions of stress. It was found that men and women perceive household responsibility stress similarly, although men express it less frequently. Moore (2012) found significant differences in self-reported levels of organizational commitment and job satisfaction for full-time faculty members related to perceived ethical climate (i.e. egoism, benevolence, and principled). Gender differences likewise contributed significantly to self-reported levels of organizational commitment with females reporting higher levels of organizational commitment than their male counterparts. Stratford (2012) examined the struggles of tenure-track men and their work-life balance. Men tended to compartmentalize work and home lives, thereby improving time management. Men also relied on their spouses to take on more parenting responsibilities, even if that conflicted with their own egalitarian philosophy. Richard and Krieshok (1989) found that occupational rank is an important variable when discussing the differential effects of stress, strain, and coping between men and women in a university setting (Richard & Krieshok, 1989).

In this study a significant difference was found between Strain (PSQ) levels according to age groups, with the youngest and oldest faculty members feeling less strain. The data also indicated that there was a significant difference between Coping (PRQ) levels according to age groups, with the oldest group being lowest. These findings indicate that for the full-time faculty

members at the four participating institutions age significantly affects Strain and Coping levels. However, Post Hoc tests were not performed as at least one age group had fewer than two cases.

Factors of Stress and Strain

Factors of stress and strain were the last major theme throughout this study. The literature was extensive regarding the factors of stress, strain, and coping. For example, Sanders (1989) found that the highest perceived stress factor reported by all the groups was publishing. Barnes et al. (1998) found that of the variables studied, the two major correlates of intent to leave academia were time commitment and sense of community; however, time commitment did not moderate the stressor-intent relationship.

The literature has various suggestions regarding the factors of stress, strain, and coping. In 1990 Ceccio reports survey results on the major factors or stressors related to teaching business and professional writing as being paper grading, class/course issues, student communication, and professional issues. Kinman and Jones (2008) found significant main effects of high efforts, low rewards, and high overcommitment were found for all strain outcomes.

In this study the variables with the two highest means were both components of the Stress (ORQ) scale. Role Overload (RO) had the highest mean of 31.92. Those scoring high on this scale may describe their work load as increasing, unreasonable, and unsupported by needed resources. They may describe themselves as not feeling competent or well-trained. Responsibility (R) had the next highest with 26.26. Those scoring high in this area may report high levels of responsibility for the performance and activities of subordinates. They often worry others will not perform well and may have poor relationships with people at work. The variable with the third highest mean was a component of the Strain (PSQ) scale. Interpersonal Strain (IS)

had a mean of 20.92. High scorers may report frequent quarrels or excessive dependency on friend and/or loved ones. They may also withdraw or conversely, not have time to spend with friends.

Recommendations to Improve Practice

To improve the recruitment, quality of employment experience, retention, and health of professionals in institutions of higher education it is recommended that administrators, faculty members, and staff work together to develop Employment Success programs, services, policies, and initiatives that are most appropriate to help them succeed.

As higher education faculty continue to work through the tenure process it is important for administrators to be aware of possible threats to an efficient and effective workforce. Programs for employee assistance and counselling are now more common than ever in business and industry. Those people who recognize the effects of occupational stress on an individual and want to provide help are often interested in the information obtained from the OSI-R. Review of these items might serve as an opportunity for a family or colleague discussion about roles and responsibilities. This may be especially important as more families struggle with career or personal balance issues. An unhappy or highly strained employee may benefit from a career change to a better fitting position or may need assistance in coping with stress to permit better adjustment to the current work setting. Information from the OSI-R scales could eventually be used as a guide to occupational choice, especially as comparative or normative data from diverse occupations accumulate for comparison purposes (Osipow, 1998).

An unequivocal, explicit commitment by the highest levels of university leadership to enhancing employee success is essential. Executive leadership administrators should meet

frequently with all faculty and staff to assure that they are responding effectively to their needs. This commitment must be demonstrated and practiced throughout every facet of faculty academic, cultural, and social experience.

The following list of recommendations outlines strategies for improving the institutional environment for faculty members in institutions of higher education as suggested by this research study. There is a need for:

1. developing or strengthening stress sensitivity training programs for all administrators, faculty, and staff, designed to create an inclusive and supportive campus climate; these programs must be "sold" in a manner that encourages support and diminishes resistance.
2. committing to the recruitment and retention of faculty, staff, and administrators;
3. developing comprehensive orientation and retention programs with a focus on faculty success and coping methodology;
4. developing or strengthening faculty mentoring programs;
5. providing and demonstrating strong support for faculty members;
6. implementing options to relieve faculty members of responsibilities such as advising, research, and publishing in addition to teaching;
7. providing opportunities for faculty members to make administration aware of factors that are perceived as being stressful;

Recommendations for Further Research

From personal and participant concerns, the following recommendations are made for future studies regarding the stress, strain, and coping levels of faculty members:

1. A study to explore the stress, strain, and coping levels of all faculty members in selected institutions of higher education in northeast Tennessee.
2. A study to explore the stress, strain, and coping levels of administrators in selected institutions of higher education in northeast Tennessee.
3. A study to explore the stress, strain, and coping levels of all faculty members in selected institutions of higher education (not location specific).
4. A study to explore the stress, strain, and coping levels of all administrators in selected institutions of higher education (not location specific).
5. A study to explore the relationship between race and stress, strain, and coping levels of all faculty members in selected institutions of higher education in northeast Tennessee.
6. A study to explore the relationship between gender and stress, strain, and coping levels of all faculty members in selected institutions of higher education in northeast Tennessee.
7. A study to explore the relationship between job satisfaction or perceived ethical climate and stress, strain, and coping levels of all faculty members in selected institutions of higher education in northeast Tennessee.

Concluding Statement

In 2012 Keller defined stress as a situation in which environmental demands, internal demands, or both tax or exceed the adaptive resources of an individual, social system, or tissue system. It is pervasive in today's society, with nearly a third of Americans rating their average

stress levels as elevated. In fact, the effects of stress on well-being are so well recognized that U.S. Public Health officials have called for a reduction of stress since the 1970s (Keller, 2012).

I have attempted to examine the stress, strain, and coping levels of tenure-track and recently tenured faculty members in selected institutions of higher education in northeast Tennessee. Through online surveys information was collected, analyzed, and reported and research topics for future consideration were presented. The faculty members who participated in this study might have been few in number, but as reflected in the above study by Keller (2012), their stress can seem unsurmountable. However, their persistence to succeed, in spite of the challenges, is a testament of their resolve, intellect, resilience, and character. Their success is also reflective of their families, friends, campus administrators, faculty members, and staff who supported their efforts. It was my honor to witness and report the experiences of all those that shared their feelings and thoughts.

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APPENDICES

Appendix A

Instrument

Occupational Stress Inventory – Revised Sample Items

Sample Item 1: I understand what is acceptable personal behavior on my job (e.g., dress, interpersonal relations, etc.).

Sample Item 2: So many thoughts run through my head at night that I have trouble falling asleep.

Sample Item 3: When I'm relaxing, I frequently think about work.

Appendix B

Invitation for Participation

Amanda R. Carr
(423) 765-3915
adepew@gmail.com

February 25, 2013

Institution A
Street Address/P.O. Box
City, ST Zip Code

Dr. John Doe:

I am currently a doctoral student studying Educational Leadership and Policy Analysis at East Tennessee State University. My dissertation is titled *Stress Levels of Tenure-Track and Recently Tenured Faculty Members of Selected Institutions of Higher Education in Northeast Tennessee*. As I will be researching professionals in four local institutions of higher education, I would be honored if I could include you in my study.

You have been referred by your employer as a full-time faculty member (instructor, assistant professor, associate professor, or professor) that:

1) has completed the tenure process during the 2009-2010, 2010-2011, or 2011-2012 academic years
   OR
2) has been hired on a tenure-track appointment and as of the 2011-2012 academic year, not yet received tenure.

This study utilizes the Occupational Stress Inventory-Revised as it measures various aspects of occupational stress. Included in the email you have received is a link to complete OSI-R electronically. Please click the link posted below and follow all instructions given. The survey should take no more than 30 minutes to complete. This study will analyze stress levels of faculty members in our local institutions of higher education.

http://www.surveymonkey.com/s/8VV583M

I encourage you to answer the questions honestly. Research findings will be shared with your institution of higher education; however, your identity will not be disclosed. Participation in this research is completely voluntary. Your time and efforts are very much appreciated.

Thank you,

Amanda R. Carr, Ed.D, ABD

VITA

AMANDA R. CARR

Education and Certifications:

Doctor of Education in Educational Leadership
East Tennessee State University, Johnson City, TN. May 2014

Master's Degree in Educational Administration and Supervision with Administration Licensure
Lincoln Memorial University, Harrogate, TN. December 2007

Bachelor of Science in Special Education (K-12) with added Elementary (K-8) Licensure
Carson-Newman College, Jefferson City, TN. May 2006

Gifted Education Licensure
Praxis II. 2010

Highly Qualified Status
Reading (K-8), Language Arts (K-8), Mathematics (K-8), Science (K-8), Social Studies (K-8) 2006

Certificate of Teacher Training
Non-Violent Crisis Intervention. 2008

Certificate of Teacher Training
Differentiated Instruction in a Whole Group Setting. 2008

Honors and Awards:

Certificate of Achievement
Jefferson County School System. 2008

Delta Kappa Gamma Grant Award
Delta Kappa Gamma. 2005

ETS Recognition of Excellence
Principles of Learning and Teaching: Grades K-6. 2005

ETS Recognition of Excellence
Elementary Education: Content Knowledge. 2005

Professional Experience in Education:

Gifted Consultant, Sullivan County Schools, Blountville, TN 2009-2013

Supply Teacher, Supply Desk Ltd., Nottingham, England 2008

Special Education Teacher, Jefferson County Schools; Dandridge, TN 2006-2008

English Teacher, Namseoul University; Chonan, South Korea, TN 2005