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**Spiritual Well-Being and Quality of Life as Correlates of Job Stress Among Academic Chairpersons in Selected Seventh-day Adventist Tertiary Institutions**

Russell Mark Aldridge  
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SPRITUAL WELL-BEING AND QUALITY OF LIFE AS CORRELATES OF JOB STRESS AMONG ACADEMIC CHAIRPERSONS IN SELECTED SEVENTH-DAY ADVENTIST TERTIARY INSTITUTIONS

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
Russell Mark Aldridge
April 2005
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ABSTRACT

SPIRITUAL WELL-BEING AND QUALITY OF LIFE AS CORRELATES OF JOB STRESS AMONG ACADEMIC CHAIRPERSONS IN SELECTED SEVENTH-DAY ADVENTIST TERTIARY INSTITUTIONS

by

Russell Mark Aldridge

Chair: Elvin Gabriel
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

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Problem

Stress, like pain, begins at birth and remains common to the human condition throughout life, and it is a factor in the experience of every human being who ever lived. It is not merely universal but it is also endemic and omnipresent. Chairpersons, due to the bi-directional demands of administration and students are in a stressful environment. This study was undertaken to identify whether quality of life and spiritual well-being play an important role in occupational stress levels in chairpersons of Seventh-day Adventist Tertiary Institutions.
Method

Three questionnaires were used to get responses from 137 chairpersons in five major Seventh-day Adventist tertiary institutions using the survey method of data collection. Canonical correlations and linear regressions were used to analyze the three research questions in this study.

Results

The results of this study indicated that spiritual well-being, especially the existential well-being component, had a statistically significant affect upon quality of life variables. Spiritual well-being had the greatest affect upon self-esteem and creativity satisfactions. Spiritual well-being also affected occupation strains having the greatest impact upon psychological and interpersonal strains.

Conclusions

Chairpersons who experienced increased levels of spiritual well-being were more likely to have an increase in their vocational stress level, and this was especially true for their existential well-being. It can be concluded that the quality of life has a direct relationship on stress levels in the participants, seeing that higher levels of quality of life correlated with lower levels of Occupational Stress Inventory Revised variables.
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CHAPTER 1

INTRODUCTION

Stress, like pain, begins at birth and remains common to the human condition throughout life, and it is a factor in the experience of every human being who ever lived. It is not merely universal, but also endemic and omnipresent. In the timing of our biological systems, normal stress is necessary and vital. Through variations in the themes of fight or flight, stress reactions mobilize us to adapt to changing stimuli (Stein, 1983).

According to Humphrey (1998), there is no solid agreement regarding the derivation of stress; however, he posits that in essence stress can be considered as any factor acting internally or externally that makes it difficult to adapt, and that induces increased effort on the part of the individual to maintain a state of equilibrium between himself or herself and the external environment.

When this state of equilibrium or balance disintegrates, a stress overload is experienced. This compounded stress can contribute to sudden death—as it does each year for thousands of victims of heart attack and stroke, or it can contribute slowly and insidiously—as it does for millions—to a vast assessment of other equally devastating physical and mental disorders. Long periods of stress unfailingly leave their mark (Stein, 1983).
Within the past 10 to 15 years, researchers have been focusing on stress in the workplace. Humphrey (1998) emphasized that stress on the job could be described simply as various degrees of incompatibility between the individual and his or her work environment. Stress in organizations is of concern to both managers and professionals because of the adverse consequences and costs associated with job strain and job distress (Quick, Quick, Nelson, & Hurrell, 1997).

There seems to be no question that job stress has reached worldwide epidemic proportions. In fact, a 1993 newsletter of the American Institute of Stress made such a pronouncement with the statement that “a variety of surveys confirm that occupational pressures represent the leading source of stress for adult Americans and that the problem has escalated progressively over the past decade” (as cited in Humphrey, 1998).

Compared to other fields of scientific inquiry, the study of occupational stress is relatively new. In fact, the earliest work related to stress can be traced back to the pioneering work of the physiologist Walter Canon in the early part of the last century and his investigations of the relationship between emotions and physiological responses. The actual scientific investigation of stress goes back only 50 years to the work of Hans Selye (1956), who is generally regarded as the “father of stress” (Jex, 1998). More recently there has been an important focus on the health consequences of stress in the workplace, both out of concern for individuals and organizations. This concern is founded on the idea that the intense or persistent stimulation of the stress response without sufficient rest or recovery can result in a host of health problems (Quick, Horn, & Quick, 1986).

According to Murphy and Hurrell (1987), research on health consequences in
occupational stress was motivated by the establishment of the National Institute for Occupational Safety and Health (NIOSH) in response to the Occupational and Health Act of 1970. Its primary goal was to ensure that America’s working public were functioning under safe conditions. This involved monitoring psychological, behavioral, and motivational factors pertaining to health and safety.

The first major program of research investigating stress in organizations was undertaken at the University of Michigan’s Institute for Social Research in the early 1960s. Since then, research on occupational stress has escalated; however, there is still room for improvement in research design and methodologies. Such improvement will improve one’s understanding of the phenomenon (Jex, 1998).

Relationships between various work stressors and dimensions of individual well-being have been previously established. These have shown statistically significant relationships between measures of work stress and individual well-being. There are, however, a paucity of studies which investigate the relationship between religions orientation and job stress.

This study addresses the problem of job stress among academic chairpersons in a university environment and the relational effects of quality of life and spiritual well-being on such stress. It would suggest that due to the unique and demanding nature of academic chairpersons’ responsibilities, their work may make them more susceptible to stress overload. Seagren and others (1993) use the metaphor of a block of wood held in a vise for shaping to describe the situation of an academic chair, who is squeezed between the demands of upper administration and institutional expectations on the one side, and the
expectations of faculty, staff and students on the other, with both attempting to influence and shape the chair.

Statement of the Problem

The literature documents that chairs of academic departments will be expected to perform in an increasingly complex, diverse, and changing environment, with ever-increasing expectations from the institution and the faculty.

Numerous studies have been conducted on the tasks, activities, roles, and responsibilities of departmental chairs. Despite researchers' abilities to identify tasks and job-related duties, the chair's role continues to be ambiguous, unclear in terms of authority, and bipolar with regard to classification as a faculty or administrative designation—all of which contributes to a high level of stress. Thus they must learn to cope readily with the demands of being in the middle with responsibilities to both faculty and administration (Seagren et al., 1993).

This view of the academic department chair’s role is substantiated by McCarty and Reyes (1987) who coined the term “The Janus Job” to describe the chair’s roles and function. In Roman mythology, the god Janus was depicted as the god who had two faces, one is that of an administrator’s and the other of a faculty member.

Within this spectrum of role complexities and ambiguities, researchers need to further investigate the nature of department chair stress and the significant variables that are associated with such stress.
Purpose of the Study

The purpose of the study was to investigate the relational effects of quality of life and spiritual well-being on job stress among academic chairpersons in selected Seventh-day Adventist institutions of higher education.

Research Questions

1. What selected Strain variables are related to Spiritual Well-being variables as measured by the Occupational Stress Inventory-Revised and Spiritual Well-Being inventories among chairpersons of Seventh-day Adventist Universities in the North American Division?

2. What selected variables of the Quality of Life Inventory (QOLI) are related to Strain variables as measured by the OSI-R among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division?

3. What stress catalyst variables as measured by the SWB and QOLI are related to the OSI-R Strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division?

Research Hypotheses

Several hypotheses were developed to test each research question in this study.

Question 1: What selected Strain variables are related to Spiritual Well-being variables as measured by the OSI-R and SWB inventories among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division?

From this question the following hypotheses were generated:
Hypothesis 1: There is significant relationship between religiosity and the four OSI-R variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 2: There is significant relationship between existential well-being and the four OSI-R variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

*Question 2: What selected variables of the Quality of Life Inventory are related to Strain variables as measured by the OSI-R among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.*

From this question the following hypotheses were generated:

Hypothesis 3: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the vocational strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 4: There is a linear combination of the six QOLI importance variables which yield a significant relationship with the vocational strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 5: There is a linear combination of the six QOLI satisfaction variables which yield a significant relationship with the psychological strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 6: There is a linear combination of the six QOLI importance variables which yield a significant relationship with the psychological strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.
Hypothesis 7: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the interpersonal strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 8: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the interpersonal strain variable among chairpersons of Seventh-day Adventist universities in the North American Division.

Hypothesis 9: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the physical strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 10: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the physical strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 11: There is significant relationship between the 12 QOLI importance and satisfaction variables and the 4 OSI-R strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 12: There is significant relationship between a linear combination of the 6 QOLI importance variables and a linear combination of the 4 OSI-R strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 13: There is significant relationship between the 6 QOLI satisfaction variables and a linear combination of the 4 OSI-R strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.
Question 3: What stress catalyst variables as measured by the SWB and QOLI are related to the OSI-R Strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division?

From this question the following hypotheses were generated:

Hypothesis 14: There is a linear combination of the stress catalyst variables which yield a significant relationship with the vocational strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 15: There is a linear combination of stress catalyst variables which yield a significant relationship with the psychological strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 16: There is a linear combination of stress catalyst variables which yield a significant relationship with the interpersonal strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 17: There is a linear combination of stress catalyst variables which yield a significant relationship with the physical strain variable among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 18: There is a significant relationship between a linear combination of the stress catalyst variables and a linear combination of the 4 OSI-R strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Conceptual Framework

The conceptual paradigms which have informed the development of the problem
under investigation will be addressed in this section under the following divisions:

(a) Occupational/Job Stress, (b) Quality of Life/Subjective Well-Being, and (c) Spiritual Well-Being.

**Occupational and Job Stress**

Beehr and Franz (1987) indicated that a major source of the current interest in occupational stress can be traced to a book which documented non-experimental studies done with American workers in the early 1960s. These studies were documented by Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964). These researchers estimated that one-third or more of the employees in their national sample were experiencing some occupational stress.

A different approach to occupational stress was presented by investigators like Broadbent (1954), who studied the effects of physical stressors such as noise on the performance of laboratory tasks. Physiological responses were also studied as outcomes (Beehr & Franz, 1987).

These historical antecedents have contributed to the current state of confusion about the topic. Even if everyone used the terms the same way, there would still be observable differences in approaches to the topic (Beehr & Franz, 1987). There is a definite need for standardized and integrated perspectives on the field of occupational and organizational stress.

**Quality of Life and Subjective Well-Being**

Attempts to measure the subjective well-being (SWB) of American people were
documented in a survey by Gurin, Veroff, and Feld (1960). These researchers use economic indicators of subjective well-being, but it became evident later on that these indicators were not adequate in an understanding of Americans' quality of life (Ellison, 1983).

Subjective well-being research has developed through two stages in the last 50 years. In the first stage, researchers obtained simple happiness and satisfaction measures from various groups of respondents and then described the average levels of SWB of these groups. The work was of a descriptive nature and did not show insights on psychological process which control SWB.

In the second stage, Diener (1984) called for emphasis on psychological and theoretical research. Investigators then began to examine a number of conceptual models for explaining SWB.

In the third and final stage, the SWB research included several elements: longitudinal designs to determine better causal pathways, measures of underlying processes, experimental manipulations, and multiple measures (Diener & Biswas-Diener, 2000).

According to Frisch, Cornell, and Villanueva (1992), the constructs of life satisfaction and subjective well-being may have considerable heuristic value in helping to explain and treat a variety of psychological disorders.

**Religious/Spiritual Well-Being**

The power of spirituality and faith in maintaining and restoring health has been
increasingly recognized by mainstream medical research over the past two decades (Quick, et al., 1997).

Empirical evidence has confirmed the importance of spirituality and well-being. Comstock and Patridge (1972) discovered that the incidence of cardiovascular disease is minimized for persons who attended church regularly. Berkman and Syme (1979) also found that the mortality rate for people who did not attend religious services regularly was two to three times higher than those who attended regularly.

Ellison (1983) credited sociologists such as D.O. Moberg for developing a theoretical and empirical paradigm with regard to spiritual well-being. He believed that it is the “spirit” of human beings which propels us to search for meaning and purpose in life, to seek meaning, probably in the supernatural realm, which transcends us.

Quality of Life and Work Stress

It would be easy to assume that work stress or quality of life affect each other during the normal rigors of life. It would be reasonable to believe that the level of stress people experience in their work life would have an impact upon how much they enjoy life. It would be contrary to current evidence to believe that people do not bring their “work” home with them or that it does not affect their lives outside of their work environment. Current research is beginning to show how each of these factors impacts the other. Quality of life or subjective well-being, as previously discussed, includes a subject’s environmental situation. It takes into account whether the subject’s basic needs are met and whether the subject is able to have time for recreation and socialization. It also includes the extent to
which the subject has social, economical, and psychological support systems to rely upon. Subjective well-being also includes several dimensions such as life satisfaction, morale, happiness, congruence, and affect (Johnson, 1995). The more support structures and activities there are that allow a subject to improve or enjoy life, the more likely they are to have a higher quality of life.

However, quality of life can be affected by the amount of stress a subject faces in everyday life. This stress can either be real or perceived by the subject, but the effects are similar. Stress manifests itself in many different ways including psychological problems, substance abuse, absenteeism, loss of productivity, and a rise in health-care consumption at the societal level (Van de Klink, 2001). The effects of stress are most pronounced in the following areas: complaints, psychologic resources and responses, and perceived quality of work life. At the individual level, there are costs in terms of high rates of tension, anger, anxiety, depressed mood, mental fatigue, and sleep disturbances. These problems, usually referred to in aggregate as distress, are often classified as neurasthenia, adjustment disorders, or burnout (Van de Klink, 2001). Stress, and an inability to cope with it, leads to both physical and mental illness, as well as to lesser, yet disturbing, consequences such as demoralization and lack of motivation. These contribute to reducing people's quality of life and their ability to function optimally (Nakjima, 1994).

It is clear that “stress” causes a degradation of a subject’s quality of life by breaking down the resources the subject has available to cope with the stressful situations that they may encounter each day. However, the higher the number of tools and resources a subject has with which to respond to stress, the more likely the subject will be able to
reduce those stress levels and improve his or her quality of life. Van der Klink's study results suggest that interventions aimed at increasing the subject's psychological resources and coping responses appeared to be effective in improving perceived quality of work life, enhancing psychologic resources and responses, and reducing complaints. In summary, reducing stress, or its effects, increases the quality of life levels experienced by the subject. These studies show the interrelationship these separate factors have upon one another and strengthen the framework for this study.

**Spirituality and Quality of Life**

There is not a large body of research available that establishes the effects or importance of spirituality upon quality of life. This may be due to the fact that spirituality has been considered unscientific for many years by researchers because of a lack of interest in this area. Graduate programs have also placed little emphasis on religion for coping, support and meaning which has also affected research interests. The secularization of society also helps account for the insufficient coverage and depth of social science research on religion and quality of life (Johnson, 1995). However, during the last decade, interest in to this area has occurred which has fostered more in-depth research, much of it in the form of disease research.

The jury is still out on the relationship between religion and spirituality and disease and mortality in the scientific community; whereas in the religious community, there is no such question (Miree, 1998). In her study the effects of spirituality were looked at in American breast cancer patients. It tested the levels of anxiety, depression, and stress
management within the subjects. This study states that utilizing spiritual resources within a community helped to improve the quality of life in the subjects being studied. The study also indicated that if a person has some concept of God or faith, they can pray or meditate and read their Bible. This gives them a sense of peace and serenity which reduces their stress and anxiety levels (Miree, 1998). The study stated that spirituality positively impacted the quality of life the subjects were experiencing in spite of having a potentially deadly disease. They were more likely to have reduced stress levels caused by anxiety, lack of peace or serenity, or the inability to manage stress.

Fabricatore, Handal & Fenzel (2000) studied the effects of spirituality on subjective well-being, where he examined the impact a personal, integrated spirituality has on well-being and the role of spirituality in moderating the effects of stressors on well-being. The study states that in the investigation of positive aspects of mental health, researchers have found several aspects of an individual’s involvement in a spiritual or religious life to be positive predictors of quality of life. It goes on to say that researchers have suggested that external behavioral indicators of religious involvement (e.g., church attendance) can affect well-being through their impact on social integration and support. It also indicates more personal and subjective religious variables are thought to have a more direct and powerful effect on well-being (Fabricatore, 2000).

The results of the study suggest that personal spirituality demonstrated a small but significant positive relationship with life satisfaction and virtually no relationship with affective well-being. This finding supports an interaction between work stress and quality of life. The study also found that there was a significant interaction of stressors and
personal spirituality that helped to predict quality of life. The study also indicated that stressors would have a significant negative impact on quality of life and showed the detrimental effects of stressors on well-being. Results of his multiple regression analyses also provide some support for the hypothesis that personal spirituality would predict well-being independently of stressors. Further, it indicates that personal spirituality contributed significantly to the prediction of quality of life. It also seems to indicate that spirituality level seems to be a more accurate predictor of quality of life than were stressors, which supports the hypothesis of the research document. Johnson (1995) found, from previous research, that religion was more important than income level, social support, and altruism in determining quality of life outcomes. He also found other research indicating a weak, but significant relationship between religion and quality of life measures (Johnson, 1995).

In reviewing behavioral effects, Johnson (1995) found that early social science research and recent studies confirm that the simple religious indicator of going to church had a significant positive association with multiple aspects of quality of life and aging. Further, even through the many changes that occur over a lifetime, those who attended church more often reported easier adjustment, a greater feeling of usefulness, and greater general well-being, higher life satisfaction, and greater happiness. Church attendance has also been isolated in some research, and it was found to be more salient in reducing anxiety than other-worldly orientation or a belief in a God of comfort. Greater attendance, an indicator of formal religious participation, also enhances subjective well-being. Respondents indicated that a higher attendance participation gave them a higher level of life satisfaction. Johnson’s review also found that religious involvement especially
increased the subjective well-being of elderly women and those who felt restricted due to poor health or mobility. His review showed that the lives of Black adults were also positively enhanced with religious involvement. Church attendance has, overall, been found to be a very important factor for subjective well-being second only to subjective health and sometimes income satisfaction (Johnson, 1995).

Holt and Dellmann-Jenkins (1992) also came to the conclusion that the religious community becomes a resource for those involved in that community. The study sees church as a source of assistance, concern, and practical help for social support and sees the impact to be similarly consistent with the positive effects of friendship on subjective well-being. Cox and Hammonds (1988) found that the possibility that people of high religious commitment receive valuable resources such as a sense of belonging, identity, acceptance, and affection seems consistent with several outcomes. People of higher religious commitment are reported to have more hope, meaning, self-esteem, and security, besides greater happiness, optimism, and concern for others. Overall, the effects of the subjective dimension of religious commitment remain distinct from its social dimension, which is consistent with Moberg’s findings that spiritual well-being is related to other aspects of human life (Holt & Dellmann-Jenkins, 1992). Moberg (1970) reported that those of strong religious beliefs and frequent religious activity are psychologically healthier.

Holt and Dellmann-Jenkins (1992) also reported that more religious people are less agitated, less lonely, less dissatisfied with life, and are better able to handle health-related stress. Although the social aspects of religious commitment may be important, something
else beyond its social benefits also enhances well-being. Religious commitment continues to have an independent impact even when controlling for social support. There appears to be something other than social support responsible for the impact on well-being.

It seems clear that the weight of evidence suggests that religious faith or involvement contributes to a sense of well-being. Overall, greater confidence can be found for religious social support that enhances one’s quality of life more than the intrinsic realm by itself. Evidence seems to favor the social benefits of religious commitment as well.

Work Stress and Spirituality

Consideration of the effects of spirituality on the level of work stress have been almost non-existent in the literature over the past 50 years, mainly because the scientific community during this time did not allow for the mixing of spirituality with “regular” science practices. In fact, the study of psychology was directly affected by its founding father, Sigmund Freud, and by his refusal to account for the impact of religion on mental and physical well-being in his teachings (McKegney, 2001). However, the medical establishment did not take such an exclusive approach to the effects of spirituality, and recent limited research seems to support their more inclusive approach.

The value of spirituality in the workplace has begun to be recognized by corporations specifically due to the impact it has on health-care expenses (Pritz, 2000). They have recognized that a growing body of research has established that effects associated with spirituality, such as positive attitude, can mitigate the negative effects, thereby reducing expenses. Pritz (2001), in a study conducted by the High Tor Alliance,
found workplace spirituality is beneficial and possibly necessary for long-term organizational survival. Overall, it has been found that religious and spiritual beliefs are an important part of how people deal with the highs and lows associated with everyday work life. Their faith can provide guidelines for living and a sense of purpose. Medical studies have confirmed that spirituality can have a profound effect on mental states (Nemours Foundation, 2001).

Work stress can also create mental and physical/health responses that negatively affect daily life. Recent research has begun to establish that belief systems can influence patients’ perceptions of health and illness and help to support cognition that affect stress and physiology (Albert, 2001). Their research creates a link between spirituality and stress outcomes. Spiritual beliefs are shown to have an impact on stress behaviors and health outcomes as well. In fact, the Mormons and Seventh-day Adventists incorporate specific health behaviors that seem to promote positive general health (Albert, 2001). Other researchers have begun to discuss the psychological connections between religious beliefs and health outcomes (McFadden, 1995). Other studies have found that people who believe in a higher power tend to live longer, report a higher quality of life, experience fewer drug and alcohol problems, and appear to have fewer mental and physical problems (Albert, 2001). Previous established research has shown that these problems are usually associated with higher levels of stress, which affect quality of life. The studies also showed that spirituality helps promote good health and fight disease by offering additional social supports and improving coping skills through prayer and philosophy that all things have a purpose (Nemours Foundation, 2001).
What we think or believe directly affects our stress levels and our physical responses to them. Recent studies on mind-body connection have targeted two physical systems that control possible mediation pathways: the nervous and immune systems. In fact, a whole new area of research has developed: psychoneuroimmunology. Research in this area seems to indicate that cognition interacts with physiological states, which may then have a direct effect on health (Albert, 2001). This seems to be supported by research that showed that people with greater predispositions to display anger and corresponding stress are at far greater risk for developing heart disease (Albert, 2001). Other studies of stress have highlighted the relationship between immune changes and psychological factors. Natural killer (NK) cells appear to have an important role in preventing disease and tumors, and it has been found that these cells show a decreased level after stress from loneliness, grief, marital strain, and school/work issues (Albert, 2001). It has also been established that spiritual/religious people exhibit fewer self-destructive behaviors (smoking, suicide, and substance abuse), less stress, and a greater total life satisfaction as well as reduced depression levels, improved blood pressure, and boosted immune systems (Nemours Foundation, 2001).

One researcher, Dr. Chandrakant Shah, has gone even further in suggesting that 43,000 (20%) deaths each year in Canada may be attributed to low levels of spirituality (De Sousa, 2001). The researcher used Statistical data from Canada's National Population Health Survey and 42 other similar studies. His findings were consistent with other studies that show spirituality reduces stress, promotes healthy lifestyle choices and increases our feelings of belonging to a social network—all of which are associated with lower mortality.
Studies (DeSousa, 2001; Diener, 1984; Diener & Biswas-Diener, 2000; Fabricatore, 2000; Humphrey, 1998; Johnson, 1995; Pritz, 2001; Quicket al., 1997; Van de Klink, 2001) have established that spirituality reduces the psychological, physical, and social effects of stress as well as having a measurable effect on work stress and on the responses exhibited towards work stress in the individuals studied. Three research questions were developed for this study taking into consideration; (a) occupational/job stress, (b) quality of life/subjective well-being, and (c) spiritual well-being which includes existential well-being and religiosity. From the three research questions, 18 hypotheses were developed to guide the inductive aspect of this study in order to investigate the nature of departmental chair stress and the significant variables that are associated with such stress.

Significance of the Study

The academic environment in the year 2000 and beyond will have its share of psychological, social, and physical pressures. Historically, academic leaders appear to have undergone a transformation to chief academic officers, with more emphasis placed on extramural funding, personnel decision making, and alumni relations. Increasingly, the vision of an academic leader (e.g., department chair, dean, provost, rector and president) as a quiet scholarly leader has been overtaken by this executive image of one who is politically astute and economically savvy (Gmelch, 2000).

Gmelch (2000) reiterated that over the past two decades pressures have begun to
transform the once unquestioned administrator into an individual struggling to find balance between total academic immersion and a fulfilled private life. Academic leaders abilities to develop a balanced lifestyle depends on how well they can make trade-offs between leadership and personal interests. In response to whether they believed their private lives are in balance with their professional lives, 80% indicated that the lack of balance caused them moderate to severe stress.

The struggle to find balance between academic and private life tends to be characteristic of academic department chairs, whose roles and functions can be both complex and ambiguous. According to Edwards (1999), department chairs organize hiring and do personnel administration not just of colleagues within their academic discipline, but also of clerical and technical staff and others. They conduct annual performance reviews, confer raises, and adjudicate staff disputes. They oversee administrating the curriculum, assigning classrooms, advising students, recording grades, maintaining majors’ files, gaining approval for course changes, and assessing student learning. They supervise the purchase of supplies, computers, other technical equipment, and plan for facilities’ renovation and construction. They must ensure that their faculty and staff operate within the complicated and changing rules derived from, among other sources, federal and state statutes on race, gender and age discrimination, treatment of people with disabilities, drug-free and safe workplaces, and multiple other employment rights. And they must manage compliance with complicated, quasi-legal university rules on hiring, tenure, program review, academic rights, benefit policies, etc.

Beyond carrying out these manifold (and multiplying) administrative tasks,
department chairs are also challenged with providing leadership for their units—doing such things as articulating goals and aspirations, communicating institutional policies, seeking new opportunities, understanding external constraints or pressures, inspiring high-level performance, eliminating sub-par work, and allocating resources strategically. Despite evidence of the pressures and complexities of the roles and functions of academic department chairs and the wide acknowledgment that this position is crucial to the operation of colleges and universities, it has suffered from a general lack of attention from educational researchers (Knight & Holen, 1985).

The results of this study will add to the general body of knowledge in this area and will provide academic leaders and faculty with relevant insights on quality of life and spiritual well-being as correlates of job stress.

**Delimitations of Study**

This study is delimited to selected academic department chairpersons in selected Seventh-day Adventist tertiary institutions in the North American Division using the following instruments to measure stress: Spiritual Well-being (SWB), Quality of Life Inventory (QOLI), and Occupational Stress Inventory Revised (OSI-R). The results can be applied only to the groups being studied as a homogeneous grouping. The study is also limited to the answers selected by the participants on the aforementioned instruments, and is dependent upon the accuracy of their responses about the stress and well-being levels they are actually experiencing in their lives. Study results were analyzed within the framework created by the stress and well-being definitions described in the study.
Limitations of Study

The population in this study was restricted to the groups being studied in selected Seventh-day Adventist institutions in the continental United States. The results cannot be generalized to specific age ranges because the data collected did not have age-specific identifiers.

Definition of Terms

*Job Stress:* Various degrees of incapability between the individual and his or her work environment. More specifically, job stress is concerned with work-related conditions that contribute substantially to the onset of the stress response (Humphrey, 1998).

*Spiritual Well-Being:* The affirmation of life in a relationship with God, self, community, and environment that nurtures and celebrates wholeness (National Interfaith Coalition on Aging, 1975). This definition suggests that spiritual well-being involves a religious component and a social-psychological component (Ellison, 1982).

*Quality of Life:* Refers to an individual's subjective evaluation of the degree to which his or her most important needs, goals, and wishes have been fulfilled. Life satisfaction along with negative and positive effects are viewed as components of the broader construct of subjective well-being or happiness (Frisch, et al., 1992). For the purposes of this research the terms “life satisfaction,” “quality of life,” and “subjective well-being” are used interchangeably.

*Stress Catalyst Variables:* Refers to the seven QOLI Importance variables, seven QOLI Satisfaction variables, and two SWB variables.
North American Division: Refers to a sub-entity of the General Conference of Seventh-day Adventists, the governing organization of the Seventh-day Adventist church located in Silver Spring, MD. It covers the land area of the United States and Canada.

Organization of Study

This study is organized into five chapters. Chapter 1 contains the problem statement, the purpose of the study, the significance of the study, limitations and delimitations of the study, research questions, definitions of the terms, theoretical/conceptual framework, and the organization of the study.

Chapter 2 documents a review of related literature on stress in organizations, the religious/spiritual well-being -health connection, the quality of life -health connection, and occupational stress among college and university faculty and administrators.

Chapter 3 presents the sampling process and, population frame, and describes how data were collected and analyzed, and used for making inferences and conclusions from this study.

Chapter 4 documents the results of the study based on descriptive and inferential statistics analysis, where inferential statistics are presented in the form of multiple regression.

Chapter 5 seeks to integrate the results based with current theory and research. This chapter also highlights the significant findings and considers these findings in view of current research. This chapter delineates conclusions, recommendations for practice, and recommendations for research.
CHAPTER 2

REVIEW OF THE LITERATURE

This chapter will document, summarize, and analyze theoretical/philosophical perspectives and empirical data for the following areas which relate to the research problem: (a) religiosity/spiritual well-being–health connection, (b) the quality of life/subjective well-being–health connection, (c) job stress in organizations, and (d) job stress among college and university faculty and administrators.

Religiosity/Spiritual Well-Being and Health

The volume and quality of research on what we term the religion-health connection have increased markedly in recent years. This interest in the complex relationship between religion and mental and physical health is being fueled by energetic research programs in several fields, including sociology, psychology, health behavior and health education, psychiatry, gerontology, and social epidemiology (Ellison & Levin, 1998). The positive influence of spirituality on the well-being of patients is now being empirically supported and documented, and professionals are becoming more open to the idea of considering a patient’s commitment to religion. Among the rationales listed to support religion’s benefit to mental health are the ideas that religion reduces anxiety, offers hope, meaning, and purpose, provides solutions, partially solves the problem of mortality, gives people a sense
of power, and offers a well-focused social identity (Schumaker, 1992).

In their review of quantitative literature surrounding spirituality, physical and emotional health, Larson and Larson (2003) indicated that there is a potential relevance of patient spirituality to physical and mental health. They reiterated that longitudinal studies have found a protective link between frequent religious participation and increased chances for living longer. They concluded that, whether a risk factor or protective factor, it seems that there is some potential correlation between spirituality and mental/physical health.

There are numerous reasons why the study of religiosity and health connections is now being evaluated. Among these are the rapid growth in prison populations today. This growth has presented correctional facilities with many financial challenges, including the increasing cost of health care, including mental health services. Factors such as the aging prison populations and increasing prevalence of such diseases as AIDS and tuberculosis have created a burden for correctional facilities (Johnson & Larson, 1998). Prison inmates are also at increased risk for suicidal behavior and mental illness. Based on studies that have indicated that persons who are committed to religion have fewer suicide impulses and longer life expectancies, Johnson and Larson (1998) concluded that there is strong evidence for preventing and possibly reducing suicide rates in correctional environments. The evidence is so convincing that he recommended that correctional administrators take steps to facilitate religious programming.

Incarcerated populations have not been the only groups participating in research on
the influence of religion on mental health. Michaud (1998) cited two studies conducted by Dr. Harold Koenig, Director of the Duke University Center for the Study of Religion, Spirituality and Health. The first of those studies involved 87 seriously depressed men and women. It revealed that those who put spirituality at the center of their lives, recovered 70% faster than those who did not, and the more spiritually centered the person was, the faster he or she healed. The second study involved 1,700 people over the age of 65, where the immune system factors in those who attended religious services were compared to those who did not. Results confirmed that those who went to services, even if they just went once a month, had a significant stronger immune system.

Another study, published by the American Academy of Child and Adolescent Psychiatry, found a link between mothers’ religious beliefs and their children’s depression in later life. Daughters whose mothers considered religion to be very important were 60% less likely to have a major depressive disorder, than those whose mothers believed that religion was unimportant. Children who still shared their mothers’ faith after 10 years were 71% (daughters) to 84% (sons) less likely to get depressed (McGovern, 1998).

One study of 100 AIDS patients found a significant correlation between a sense of spiritual well-being and hardiness. Studies done by Green and Hixon found that there was an inverse effect between both systolic and diastolic blood pressure, and the level of religious activity (Pizzorno, 1999). Five community-based studies have concluded that the religiously committed person has a better chance of living longer than persons who have no religious commitments, and these religiously committed persons were also more satisfied with their lives (Pizzorno, 1999).
Johnson and Larson (1998) have shown that religiousness and religious practices in particular are positively related to personal and emotional well-being. They concluded that in addition to fostering feelings of satisfaction and well-being, there is evidence that the religiously-connected experienced less stress than the less connected, and when they have similar levels as others, the religiously committed coped more effectively with their stress than do the less religious.

The body of evidence on the credibility of spirituality’s influence on health led Dr. Harold Benson, a researcher at Harvard University, to conclude that humans must be “wired for God” (Michaud, 1998). David Benner, a psychologist and spiritual director, considers the fields of psychotherapy and spiritual direction to be forms of “soul care.” He posited that both psychotherapy, practiced by a Christian, and spiritual direction attend to the same domain of personhood, and “a spirituality that is not psychologically grounded, is of no more use than a psychology that is not spiritually grounded” (Benner, 2002).

Dr. Dale Matthews (as cited in Michaud, 1998), Professor of Medicine at Georgetown University, gives reasons why faith speeds recovery, and they are as follows:

1. The body responds positively to faith. If you practice your faith regularly, your “blood pressure and pulse rate tend to be lower, consumption better, brain wave patterns slower, and immune function enhanced” (p. 106).

2. Your mind is at peace. Having faith also gives you a sense of peace, and an ability to help you look beyond your present problems with hope, which can reduce stress,
and lower your risk of anxiety and depression.

3. You take better care of yourself. "Religiously committed people are less likely to drink and smoke, and they're more likely to take their medicines, and wear seat belts, than nonreligious people" (P. 106).

4. You are part of a healing community. For many people, the church, temple, or mosque is "family." It is there that they feel "a sense of connection, meaning and purpose. "They're surrounded by people who share the same beliefs they do, people who call them when they don't attend worship, visit them when they're in the hospital, and even bake them cookies and casseroles when they return home" (Michaud, 1998, p. 106).

Religion and spirituality have also been implicated as mediators for stress. In a study that examined the impact of a personal, integrated spirituality on well-being, and its role in moderating the effects of stressors on well-being (Fabricatore, Handal, & Fenzel, 2000), it was confirmed that stressors predicted both dimensions of subjective well-being (satisfaction with life and affective well-being), and that personal spirituality significantly added to the prediction of satisfaction with life. Personal spirituality was also found to moderate the relationship between stressors and life satisfaction.

In a study conducted by Graham, Furr, Flowers, and Burke (2001), the relationship between religion and stress was examined, using a sample of 115 graduates, and religion and spirituality were found to be positively correlated with coping with stress. Subjects who express spirituality through religious beliefs had greater spiritual health and immunity to stressful situations than subjects who identified themselves as spiritual, but not
religious. In studies done by Ellison, Boardman, Williams, and Jackson (2001), results revealed that the frequency of church attendance was positively associated with well-being, and inversely associated with distress. Other studies have shown that religion has a positive impact on mental health in adulthood (Ellison, Gay, and Glass 1989; Gurin et al., 1960). Ellison and Levin (1998) emphasized that a number of research studies have investigated the association between religion and mental health outcomes—personality variables, distress scores depression and anxiety and have consistently confirmed that aspects of religious involvement are correlated with desirable mental health outcomes.

Koenig, George, and Siegler (1988) examined psychological adjustment in a stratified random sample of 1,000 older adults, and found mean scores on 12 commonly used social psychological scales of adjustment and well-being when compared across different frequencies of religious coping. While no significant differences in adjustment scores were found between religious and non-religious copers, the group achieving the highest score on 9 of 12 measures was also the group with the highest frequency of religious coping. The latter finding was particularly notable, in that this group also experienced more intense life-stressors, and was more likely to be from a lower social class, both well-known factors for maladjustment and depression (Koenig, 1999).

Within recent times, studies that explored links between religion and mental health were often characterized by sampling and analytic limitations such as small unrepresentative samples. According to Ellison (1982), the spiritual dimension does not exist in isolation from one “psyche” and “soma,” but provides an integrative force. It affects and is affected by our physical state, feelings, thoughts, and relationships. If we are spiritually healthy, we
will feel generally alive purposeful, and fulfilled, only to the extent that we are psychologically healthy as well.

Studies done by Maloney and Palontzian (Oakes, 2000) concluded that intrinsic religious style was associated with maturity and positive mental health, while extrinsically oriented individuals are generally viewed as needing self-aggrandizement, security, status, and social recognition. Oakes (2000) also found religiousness to be a coping resource in a healthy defense against depression, stress, crisis, and other trauma. Greenwold et al. (1995) indicated that in examining the relationship between spirituality and mental health through published research studies, it was quite evident that people who view God or their religion as important to them, or who attend religious gatherings on a regular basis, have better mental health than those who do not. Greenwold, and Lawson (1995) concluded that religious commitment may act as a buffer against the effects of stress on mental health.

Ellison and Levin (1998) assessed the strength of empirical evidence on linkage between religious involvement and health by analyzing review articles on hundreds of studies, some dating back to the 1800s. They emphasized that there is convincing evidence that mortality and mobility rates vary across religions and religious denominations, but there is consistent evidence that, on average, high levels of religious involvement are moderately associated with better health status. Even though some of the best-known studies have focused on morbidity and mortality in sectarian groups, a substantial body of literature appears to indicate desirable effects of other aspects of religious involvement (i.e., frequency of attendance and subjective religiosity) on a wide range of health
outcomes.

Religious involvement may also promote mental and physical well-being by regulating health-related conduct in ways that decrease the risk of disease. These include (a) discouraging certain behaviors that increase the risk of health problems and (b) encouraging positive low-stress lifestyle choices (Ellison & Levin, 1998).

According to Noble (1996), the association between religiosity and psychological well-being remains a complex and intriguing area for investigation. She also noted that researchers and reviewers have concluded that the two variables are positively but weakly associated. Studies done by Robbins and Francis (Noble, 1996) examined the association between positive affect and a measure of religiosity, using a sample of 360 undergraduate students at a college in Wales (UK). A significant association ($r = .26, p < .001$) between scores on the Francis Scale of Attitude Toward Christianity (Frances & Stubbs, 1987) and scores on the Happiness Inventory was noted (Argyle, Martin, & Crossland, 1989).

Ellison and others (1989) examined the relationships between multiple dimensions of religiosity, secular forms of social involvement, demographics, covariates, and subjective reports of life satisfaction. Also, affiliation with certain denominations appears positively associated with satisfaction. Given the amount of literature heralding the positive effects of spirituality and health, and medical and mental health, training programs are beginning to take notice. Despite the fact that medical personnel purport to take a holistic view of patient care, training and practice in the medical field rarely include more than intervening on the physical and psychological level. Research, however, is rapidly...
changing the face of medicine, in that more than 40 U.S. medical schools are now offering courses on the role of faith in medicine, and all psychiatric residency programs are required to address the role of spirituality and religion (McGovern, 1998). Nolan and Crawford (1997) posited that nurses must reintroduce "spirituality" into the language of nursing. They concluded that "recognition of the spiritual dimensions of nursing work will enable practitioners to accept the beliefs and values which patients hold, and to begin to understand the meanings they attribute to their lives" (p. 293).

This view of providing health care may very well apply to all professions, including the mental health profession. Nevertheless, Oat's study (as cited in Maloney, 1992) stated that "the patient has no right to expect his psychiatrist to be a trained theologian any more than he has to think of his pastor as a diagnostician of nervous and mental diseases" (p. 254). Maloney (1992) asserted, however, that it is expected that mental health professionals take seriously the religion of their patients, while relying on informed content of valid and reliable measures.

The positive correlations found in many studies evaluating health and religion/spirituality do not come without caveats. Reports from denominational groups that refuse medical care indicate higher mortality rates for these groups. About 5% of studies conducted about religion and health, document these negative effects of religion (McGovern, 1998). Masters and Bergin (1992) cautioned that at least one study has shown that one must actually behave in accordance with his/her religious beliefs in order for there to be beneficial mental health consequences. Some studies have found no significant correlations between spirituality and health. In a study that focused on
investigating how customary religious activities promote positive well-being, and prevent psychosis in African Americans, Levin and Taylor (1998) found that while the study indicated statistically significant effects of religious activity, there was little evidence for long-term influences on well-being and psychological distress.

Findings in Atchley's 14-year study (1997) were also at odds with numerous findings of positive correlations between religiosity variables and psychological and physical well-being. In Atchley's study, respondents' ratings of the importance of being religious over time, and how their initial rating of being religious affects physical and psychological well-being later, were examined. The mean scores of those who valued religion and those who did not think religion to be important were compared; no differences were found between the group for health measures.

Jarvis and Northcott (1987) revealed that religion may have adverse effects on health, through rituals, suicide, and endogamous marriage practices. Lewin and Markides (1988), in a study of older Mexican Americans, suggested that guilt, which may be derived from trying to follow strict religious practices, may lead to hypertension.

**Quality of Life/Subjective Well-Being and Health**

Quality of life (QOL) is a multidimensional concept that includes both subjective and objective factors. According to Staats (1991), people's perceptions of QOL are important to political leaders, citizens, business people, and psychologists. Initial measures of quality of life, such as income, age, and sex, were found to account for only 10% of variance in quality of life measurements. For this reason, McVilly and Rawlinson (1998)
assert that while objective evaluation of QOL is important, subjective data are central and essential.

Research on quality of life indicated that there should be at least three approaches (or domains) to measuring quality of life outcomes (Fabian, 1991; Katschnig, 2000), such as: (a) a measure of life satisfaction across multiple life domains; (b) a measure of adaptive functioning or environmental mastery; and (c) a social indicator measuring changes among specified groups of people and external resources.

According to Christopher (1999), subjective well-being (SWB) consists of two components: (a) judgments about life satisfaction, and (b) affective balance. Life satisfaction is based on an individual’s subjective cognitive appraisals.

In recent years, there have been numerous studies on QOL, SWB, and health. In one study conducted with first year students at a Swedish university (Vaez & LaFlamme, 2003) psychology and physical self-rated health were strongly correlated with self-perceived quality of life. In another study, 239 persons over the age of 50 were recruited to attend five training sessions, designed to increase hope and QOL. Experimental groups were given training in increasing happiness and positive activities, goal setting and imagining achievement goals. It was found that perceived QOL can be increased in older populations. This finding may be useful for facilitating interventions on the individual and national level (Staats, 1991).

Harsu and Bolen (1998) used three levels of optimism to compare coping and subjective QOL among college students. High optimists were found to have the highest...
overall QOL. Mid-level optimists were satisfied with their QOL, but reported using more alcohol as a coping style than high optimists. Low optimists were dissatisfied with their overall QOL, and used more alcohol to cope, and women reported greater QOL.

Kuijer and DeRidder (2003) conducted a study to determine if the attainment of goals by chronically ill patients is related to QOL and psychological well-being. Results indicated that more discrepancy in goal importance and attainability was generally associated with lower levels of QOL and psychological well-being. Self-efficacy in achieving desired health outcomes was found to mediate this relationship.

LaBarbera (1997) found that there was support for the main effects of a negative relationship between materialism and SWB, and a positive relationship between religiosity and SWB. Religious service attendance was also found to be associated with SWB. Comptom (2001) appeared to support the idea that psychological well-being can be conceptualized by a model that contains factors for SWB, personal growth, and a selfless style of religiosity.

Hansson (2002) found that not only do persons suffering from depression have lower levels of subjective QOL, but they also perceive a worse quality of life than normal control groups. It was also noted that persons suffering from depression had worse subjective QOL than persons with other psychiatric disorders. Evidence was also found to indicate that QOL was compromised in populations suffering from anxiety disorders (most specifically, panic disorder and post-traumatic stress disorder).

The importance of goals and values has been inextricably linked with subjective
well-being and life satisfaction. Diener and Biswas-Diener (2000) emphasized that if people make progress toward their particular goals, and act in accordance with their values, they are likely to be happy. They found that people have more positive affect if they succeed at their particular goals, than if their goals are in conflict.

**Job Stress in Organizations: An Overview**

Kahn et al. (1964) studied the organizational stress phenomenon from a social psychological theoretical perspective. Their research emphasis was on the constructs of role conflict, role ambiguity, and the person-environment fit within the context of one’s social role. The primary objective of their research was to reveal that confusion and conflict can result in individual distress and strain (Quick et al. 1997).

Stress in organizations is of paramount importance because of the costs associated with job strain and job distress. The direct costs include dysfunctional turnover, absenteeism, health care, and compensation awards of various categories. The indirect costs include poor morale and job satisfaction (Quick et al., 1997). Although stress is an individualized experience, a number of demands may become stressors for personnel in organizations. These demands according to Quick and others (1997) may fall into four categories, namely, (a) physical, (b) role, (c) tasks, and (d) interpersonal.

Some occupations by their very nature appear to be particularly vulnerable to stressors emanating from the physical environment in which the work is performed. Work in the construction, lumber, and mining industries is physically demanding. It is a mistake to assume that only blue-collar workers encounter physical demands. White-collar jobs
involve a different set of stressors that are also physically demanding (Quick et al., 1997).

Role factors are related to the behaviors others expect of employees as they fulfill their organizational functions. Roles are typically defined in terms of the behavioral expectations that various groups communicate to an individual at work (Quick et al., 1997).

Quick and others (1997) highlighted two types of dysfunctional roles activities which are inherent in organizations. The first is called “role conflict,” which occurs when an individual communicates his/her expectations about how he/she should behave, and these expectations make it difficult or impossible to fulfill other expectations. The second, called “role ambiguity,” occurs when supervisors or administrators do not give adequate information to their staff as to what is expected of them, or communicate information which is unclear.

Interpersonal stressors at work are concerned with the demands of the normal course of social, personal, and working relationships in the organization. Individuals have various distinctive personality and behavioral characteristics that are sources of stimulation for some people (positively stressful) and aggravation or irritation for others (negatively stressful). Individuals with clear-cut, powerful personalities may be more stressful to deal with than bland, withdrawn individuals, although the reverse can also be the case (Quick et al., 1997).

Spector (1997) indicated that there have been concerns that job attitudes may be linked directly to psychological and physical health. Dislike for one’s job may have an
adverse effect on one’s health where job dissatisfaction may shorten one’s life. A number of studies (Begley & Czajka, 1993; Fox, Dwyer, & Ganster, 1993; Lee, Ashford, & Bibko, 1990; O’Driscoll & Beehr, 1994) reported significant correlations between job satisfaction and physical or psychosomatic symptoms. Further studies (Jex & Gudanowski, 1992) found that emotional states of anxiety were related to job satisfaction.

Academic institutions of higher learning are not immune from the stressors which affect other organizations. Melendez and de Guzman (1983) surveyed approximately 2,000 faculty members at 17 colleges and results indicated that 62% experienced moderate or severe job stress. Gmelch (1984) surveyed over 1,900 professors at 80 public and private universities and found that 60% of their total daily stress can be attributed to their roles and functions as faculty members.

According to Seldin (1987), there is a strong possibility that the academic environment, particularly during the decade of the 80s, contributed to the stress on professors. The following reasons were noted:

1. Requirements for promotion and tenure are so stringent today as to be unrealizable for many academics.

2. Academic retrenchment, jobless faculty, inflation, and the changing composition of student bodies are altering the academic environment.

3. Professors are more aware today of the wide discrepancy between their hopes and expectations, and the actual rewards offered by their profession.

4. Fewer job-change opportunities are available, and many faculty members see
themselves as imprisoned in their jobs with little chance to ascend the academic ladder.

5. Many full-time faculty members perceive part-time faculty who are growing in numbers as a potential threat.

Gmelch (1987) directed the “National Faculty Stress Research Project” which sought to: (a) identify job situations perceived by the faculty as most stressful, (b) group the stressful job situations into interpretable factors, (c) search for significant relationships between perceived stress, and personal and professional factors, such as academic discipline, rank, tenure, age, and gender, and (d) identify strategies for faculty to cope with stress. A sample of 40 public and 40 private institutions were randomly selected from among 184 doctoral-granting universities in the United States. A sample of 1,920 faculty members was drawn from the stratification, and results revealed that faculty reported that 60% of the total stress in their lives came from work. Of the 45 stressors indicated, the 10 most troublesome were: (a) imposing excessively high self-expectation, (b) securing financial support for research, (c) having insufficient time to keep abreast with current events in one’s field, (d) low pay for work done, (e) striving for publication of one’s research, (f) feeling that one is continually overloaded with work, (g) job demands interfering with personal activities, (h) lack of progress in career, (i) interruptions from telephone and drop-in visitors, and (j) meetings (Gmelch, 1987).
Occupational Stress Among Administrators, Faculty, and Department Heads

Seldin (1991) posited that “colleges and universities, are hotbeds of stress” (p. 14). He identified the following factors which are triggers for stress: (a) professors working 40-50 hours a week, with university presidents and top associates putting in more hours, (b) increased faculty productivity, due to criticisms of teaching, and the tightening of finances, (c) presidents, vice presidents, and deans dealing with demands for higher quality, while facing budgetary constraints, and (d) boards of trustees wanting strategic action plans and organizational change. He concluded that the levels of stress would likely get worse in the 1990s.

A survey study done by Blix and Lee (1991) provided data on 575 deans, associate deans, and chairpersons on occupational stress among university administrators, focused on the fit between the university and the administrator’s motivational style, and the type of job demands. This fit was analyzed as a contributing factor in developing occupational stress. Three motivational styles and types of job demands were measured, using instruments from Porter’s motivational theory. Correlational data indicated that misfit was related to perceived work stress, and the perception of poor coping ability. The perception of poor coping ability was correlated with stress-related illnesses. There was also an association between misfit and consideration to change jobs (Blix & Lee, 1991).

This study revealed that university administrators who experienced a misfit between motivational style and the type of rewards of the job, reported more stress
symptoms. They also felt less able to manage work stress, and were more likely to consider changing jobs because of the stress at work. The study suggested that a “good” fit between the motivational style of the worker and the demands in the work environment is an important element in reducing occupational stress.

Blackburn, Horowitz, Edington, and Klos (1986) conducted a study on the relationships between job strain and several quality of life (QOL) indicators for a group of university faculty and administrators, and found the QOL indicators were in the domain of the job, satisfactory life satisfaction, and health. The results of the study indicated that there are differences between faculty and administrators on a number of variables. In general, for administrators, there is a significant association between job strain and their satisfaction with their supervisor, and such an association does not exist for faculty. In addition, faculty appear to manifest job strain in the form of poorer life satisfaction, slighter higher stress-related symptomatology, and greater number of days ill. For faculty, work is life, and low estimation of the professional life is translated into low quality of life as well. As with faculty, administrators with higher levels of self-esteem, tend to report fewer health problems, and are more satisfied with their jobs and lives.

Blix, Cruise, McBeth, and Mitchell (1994) conducted a study on occupational stress among university teachers where 400 full-time tenure-track teachers were randomly selected from the California State University system to participate in the study, and found that 60% of the teachers reported experiencing stress at work at least 50% of the time. Teachers who had been teaching for more than 20 years reported the least work stress. Female teachers had significantly higher mean stress scores than did male teachers. The
majority of teachers responded that job stress negatively affected their productivity at work. Those who indicated lowered productivity were more likely to feel stressed at work, and to experience health problems.

Grant, Ali, Thorsen, Dei, and Dickie (1995) outlined what management can do for college teachers to help in coping with stress, and the following were noted: (a) eliminate any unnecessary stress, (b) improve communication channels, (c) encourage teachers to take personal time for hobbies and activities, (d) conduct workshops on stress management, relaxation, and cognitive restructuring, (e) encourage faculty to participate in fitness and exercise, (f) express clearly the mission, vision, and performance goals for the organization, (g) encourage interaction with peers (team building), (h) help teachers by offering new ideas, techniques, and allowing to rotate out of exhausting jobs, (i) encourage staff members to express their ideas, (j) involve staff in decisions that are relevant to them, (k) encourage staff members to develop support systems, (l) discuss with teachers the appropriate use of worry, and (m) help teachers in lowering unrealistic expectations (Grant et al., 1995).

Cloud (1991) noted two types of stress found in administrators namely “eustress” and “distress.” “Eustress,” or creative tension, is a positive form of stress which motivates individuals to attain higher levels of performance and achievement. In the college or university setting, “eustress” is associated with the development of new instructional programs, the construction of new facilities and campus beautification, and the acquisition of new equipment. Improved instructional methods, staff development, and progressive
personnel procedures often result from creative tension that exists on all college campuses.

The second type of stress, called “distress,” is a damaging stress that often has unpleasant, harmful side effects. Cloud has identified prominent characteristics of distress, some of which are demonstrated by: (a) reluctance to socialize with family and friends, (b) feeling out of control, and (c) administrating a tertiary level educational institution which is lacking organizational stability. He recommended that colleges and universities across the United States implement stress management training for staff, governing boards, and interested faculty, which focus on the relationship between mind and body, and the job-related events that trigger stress and illness.

Schuler (1981) provided a list of responsibilities that could cause uncertainty and stress in college administrators, and these are as follows: (a) employing a tenured faculty in the face of decline in enrollment, and a shrinking budget, (b) determining where the market is for students, and how to best serve it, (c) deciding how to compete effectively against other schools, (d) retaining good faculty, (e) dealing with public scrutiny and trustee development, (f) creating a powerful and visible institution that obtains needed resources, and (g) devising ways to find jobs for graduating students.

Schuler (1981) also listed the following stress management which may be beneficial for college administrators: (a) perceive situations as challenges rather than problems, (b) behave more like a type B than a type A person, (c) consider changing parts of your life or job that engender chronic stress, (d) be open and positively assertive, (e) use some time management techniques, (f) analyze your roles, (g) plan a response to
stress, (h) take stock of your own power and the situation you face, (i) take it easy,
(j) experiment with ways to calm yourself, (k) do something you enjoy to manage stress,
(l) design a calm environment for quieting, (m) nurture some inner peace, and (n) engage
in good diet and regular exercise.

Gmelch (2000) reiterated that, over the past two decades, pressures have begun to
transform the once unquestioned administrator into an individual who is struggling to find
balance between total academic immersion and a fulfilled private life. He stressed that
academic leaders abilities to develop a balanced lifestyle depends on how well he or she
can make the trade-offs between leadership and personal interests. Gmelch revealed that in
response to whether they believed their private life is in balance with their professional life,
80% of academic leaders indicated that the lack of balance caused them moderate to
severe stress. The struggle to find balance between academic and private life tends to be
characteristic of academic department chairs, whose roles and functions can be both
complex and ambiguous. According to Edwards (1999), department chairs organize
hiring, and do personnel administration, not just of disciplining colleagues, but also of
clerical and technical staff and others. They conduct annual performance reviews, confer
raises, and adjudicate staff disputes. They oversee administering the curriculum, assigning
classrooms, advising students, recording grades, maintaining majors’ files, gaining
approval for course changes, and assisting student learning. They supervise the purchase
of supplies, computers, and other technical equipment, and plan for facilities’ renovation
and construction. They must ensure that their faculty and staff operate within the
complicated and changing rules, derived from, federal and state statutes on race, gender,
and age discrimination, treatment of people with disabilities, drug-free workplaces, and multiple other employment rights.

Seagren and others (1993) used the metaphor of a block of wood held in a vise for shaping, to depict the job demands of an academic chair.

The chair is squeezed between the demands of upper administration and institutional expectations on the one side, and the expectations of faculty staff, and students on the other, with both attempting to influence and shape the chair. The chair is caught in the middle, required to provide the most sophisticated leadership and statesmanship, to avoid being crushed by these opposing forces. (p. 1).

According to Knight and Holen (1985), despite evidence of the pressures and complexities of the roles and functions of academic department chairs, and the wide acknowledgment that this position is crucial to the operation of colleges and universities, it has suffered from a general lack of attention from educational researchers.

It is clear from the literature that spiritual well-being, quality of life, and job stress are important factors that are important factors when considering stress’s impact on a population.

Larson and Larson (2003) found that there is a positive link between religiosity and greater lifespan. They also concluded that there is correlation between religiosity and mental/physical health. This agrees with Michaud (1998) who found that the body responds to religiosity through lower blood pressure, lower anxiety, higher maintenance, and high belongingness.

Vaez and LaFlamme (2003) found that psychological and physical health were strongly correlated with high levels of quality of life. They are supported by Hansson
(2002) who found that people with depression also tended to have low levels of quality of life satisfaction.

Finally, Melendez and de Guzman (1983) surveyed 2000 faculty and found 62% had moderate to severe stress levels. Guzman’s findings were validated by Gmelch (1984) in his study which found that 80% of the stress reported by respondents was related to their work.
CHAPTER 3

METHODOLOGY

The purpose of this study was to identify whether there is a relationship between Spiritual Well-Being and Quality of Life factors and Stress levels in chairpersons in Seventh-day Adventist tertiary institutions. Specifically this study investigated the impact of; (a) spiritual well-being, (b) existential well-being, (c) health importance, (d) health satisfaction, (e) self-esteem importance, (f) self-esteem satisfaction, (g) goals importance, (h) goals satisfaction, (i) money importance, (j) money satisfaction, (k) creativity importance, (l) creativity satisfaction, (m) helping importance, and (n) helping satisfaction on vocational, psychological, interpersonal, and physical strain levels in chairpersons in tertiary educational institutions.

The following areas are addressed in this chapter: (a) the research design, (b) instrumentation that includes the description of instruments used in this study, (c) content validity of the instruments, and (d) how data were analyzed for each research question.

Research Design

This study used the survey research design to investigate the relational effects of quality of life and spiritual well-being on job stress among academic chairpersons in
selected Seventh-day Adventist institutions of higher learning. Surveys are used to learn more about people's perceptions and attitudes towards some desired characteristics. Gay (1987) indicated that in the field of education the use of survey research design is advantageous for the collection of data about schools. "Surveys conducted by schools are usually prompted by a need for certain kind of information related to instruction, facilities, or students population" (p. 192). This study sought to gather information from academic chairpersons in relationship to their occupational stress levels.

Surveys, in addition to being descriptive, can also be used to explore relationships among variables (Gay, 1987) and this study sought to explore relationships among variables.

A number of studies (Greiner, Krause, Ragland, & Fisher, 2004, Lachterman, 2004; Law, 2004; Puentes, 2001) used the survey research design to obtain information from subjects concerning their stress levels. In view of these findings, it was appropriate to use the survey research design to collect information for this particular study.

**Sampling Procedures and Selection of Chairpersons**

Due to the small population of academic chairpersons in Seventh-day Adventist North American tertiary institutions, the decision to use the entire population was made. Frankel and Wallen (2000) indicated that when the population size is small and accessible, researchers would prefer to study the entire population. See Table 1.
Table 1

Number of Chairpersons Represented in Study by Seventh-day Adventist Tertiary Institutions by North America Division

<table>
<thead>
<tr>
<th>Tertiary Institutions</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrews University</td>
<td>39</td>
<td>28.6</td>
</tr>
<tr>
<td>Atlantic Union College</td>
<td>14</td>
<td>10.2</td>
</tr>
<tr>
<td>Colombia Union College</td>
<td>17</td>
<td>12.4</td>
</tr>
<tr>
<td>Oakwood College</td>
<td>14</td>
<td>10.2</td>
</tr>
<tr>
<td>Walla Walla College</td>
<td>17</td>
<td>12.4</td>
</tr>
<tr>
<td>Southern Adventist University</td>
<td>18</td>
<td>13.1</td>
</tr>
<tr>
<td>Southwestern Adventist University</td>
<td>18</td>
<td>13.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>137</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Instrumentation

The following instruments were used in this study: (a) Occupational Stress Inventory Revised (OSI-R), (b) Spiritual Well-Bing (SWB), and (c) Quality of Life Inventory (QOLI) (see Appendix B).

The Occupational Stress Inventory Revised is a 140-item instrument which measures three domains of occupational adjustment in employed adults. These are: (a) occupational stress, (b) psychological strain, and (c) coping resources. It was developed by Dr. Samuel H. Osipow, a Professor of Psychology at the Ohio State University, and Dr. Arnold R. Spokane, a Professor of Counseling Psychology at Lehigh...
Five social roles and one non-social aspect were identified as sources of stress. Four types of symptoms were identified as indicators of psychological strain, and four sets of behaviors were identified and then used to generate an item pool for initial development of the OSI, based on their face validity. Those items were then compiled into the first version (Form E-1) of the OSI.

The psychometric characteristics of Form E-1 were evaluated in two samples: 2-week test-retest reliability with 31 employed adults and internal consistency with 201 employed adults. Based on data from the latter sample, some items on the OSI were changed: 23 items were reworded, 2 were replaced, and others were deleted to give all of the scales an equal number (10) of items. Based on these changes, the current version of the OSI (Form E-2) was developed, consisting of 140 items and 14 scales.

The OSI (Form E-2) consists of three subsections, namely: (a) the Occupational Roles Questionnaire (ORQ) which measures the domain of occupational stress, (b) the Personal Strain Questionnaire (PSQ) measuring the domain of psychological stress experienced by an individual, and (c) the Personal Resources Questionnaire (PRQ) which measures the domain of coping resource.

Alpha coefficients for the three sections were 0.88 for the ORQ, 0.93 for the PSQ, and 0.89 for the PRQ. Coefficients for individual scales ranged from 0.71 to 0.90. Scale test-retest correlation for the PSQ was 0.74 for the total score.

Validity information was provided by analyzing the factor structure underlying the OSI scales. Factor analyses were conducted separately on the three subsections, using
three supposedly overlapping samples. One section of the OSI was used for this study: the PSQ. On this form, T-scores above 70 indicate a strong probability of high stress and strain. Scores of 40-69 fall within the normal range, and scores below 40 indicate an absence of stress and strain.

There is considerable agreement between the OSI and the OSI-R forms. Each of the 17 correlation coefficients was equal or greater than 0.63 and all were statistically significant. Overall, 3 correlations were in the 0.60-0.69 range, 10 in the 0.70-0.79 range, 3 in the 0.80-0.89 range, and one in the 0.90 or higher range. Because the correlation of items between the OSI and OSI-R is high, it suggests that the two versions are similar enough to generalize validity from the original OSI to the OSI-R and further validates the OSI-R model. A study by Elam in 1997 demonstrated the similarity of validity and reliability levels of the two forms (Osipow, 1998).

A growing research base shows the relationships between the OSI-R scales and work-related conditions, activities, and behaviors. Studies have examined the role of occupational stress on nonproductive behavior (Van Wagoner, 1985), absenteeism (Higgins, 1985), physical symptoms (Gallagher, 1983), job satisfaction (Baldwin, 1981; Missbach, 1984) and burnout (Higgins, 1985). These previous studies have successfully utilized the OSI-R and have demonstrated its value in research data gathering.

The PSQ instrument from the OSI-R consists of 40 items (see Appendix B) that measured stress levels in academic chairpersons in the North American Division of Seventh-day Adventist tertiary institutions.

The SWBS was developed by Dr. Craig W. Ellison and Dr. R.F. Paloutzian to
provide a general measure of spiritual well-being. After initial testing and revision, the SWBS was constructed. It consists of 20 items responded to on a 7-point scale ranging from strongly agree to strongly disagree. Responses for each of the items are assigned a numerical value of 1-7. Ten items measure Religious Well-Being (RWB), and 10 items measure Existential Well-Being (EWB).

Those items which refer to God are summed to provide a RWB subscale score. The remaining 10 items are summed to attain an EWB subscale score. Scores for the two subscales are summed to provide an overall measure of SWBS.

Factor analysis of the 20 items using the Varimax-rotation on data derived from 206 students at three religiously oriented colleges indicates that they clustered together. The first three eigenvalues emerging from the analysis were 7.136, 2.176, and 0.859. Two factors were retained. All of the religious items load on the RWB factor. The existential items appear to load onto two subfactors, one depicting life direction and one indicating life satisfaction.

The correlation between the subscales has ranged from 0.62 ($p < 0.001$) in two experiments with the initial 15 item version of the scale to 0.32 ($p < 0.001$) for the revision scale. High correlations were found between SWB and RWB ($r = 0.90$) and EWB ($r = 0.59$). Test-retest reliability coefficients obtained from 100 student volunteers at the University of Idaho were 0.93 (SWB), 0.96 (RWB), 0.86 (RWB), and 0.78 (EWB). These correlations suggest high reliability and internal consistency. Examination of the item content suggest preliminary validity (Ellison, 1983).

The SWB instrument consists of 20 items, 10 odd-numbered items assessed
religious well-being, and the 10 even-numbered items assessed existential well-being (see Appendix B). These items measured Spiritual Well-Being levels in academic chairpersons in the North American Division of Seventh-day Adventist tertiary institutions.

The QOLI, developed by Dr. Michael Frisch of Baylor University, assumes an individual’s overall life satisfaction in particular areas of life which are deemed important. The QOLI consists of 17 items. Each is rated by respondents in terms of its importance to their overall happiness and satisfaction (0 = not at all important, 1 = important, 2 = extremely important), and in terms of their satisfaction with the area (-3 = very dissatisfied to 3 = very satisfied).

The temporal stability of the QOLI T-scores was examined with test-retest reliability coefficients from a sub-sample of 55 participants. The retest coefficient of 0.73 was significant at the 0.001 level over a 2-week interval. Internal consistency reliability (coefficient alpha) computed for the sum of the weighted satisfaction ratings was 0.79. Further, the correlation between the sum of the weighted satisfaction ratings and the QOLI raw score was 0.99 (Frisch, 1994).

Data from two other measures of life satisfaction were collected to assess the convergent validity of the QOLI. The QOLI was positively correlated with the Satisfaction With Life Scale with \( r = 0.56 \). It was positively correlated with the Quality of Life Index with \( r = 0.75 \). These scores indicate good validity from this instrument.

The instrument has been used successfully by researchers, program administrators, and therapists for quality evaluation in both medical and psychological treatments. It has also been successfully applied in settings such as college counseling centers. Many
therapists administer the QOLI on a weekly basis to monitor client progress and have found it well suited for planning and evaluating psychological treatments (Frisch, 1994).

All of the items in these instruments used a variation of the selected-response format known as the Likert scale (Wiersma, 1991). The instrument presented a set of related statements, and chairpersons were asked to choose the best response from the responses provided for them. Fowler (1993) indicated that selected-response questions are usually a more satisfactory means of creating data when compared to open questions.

**Procedure**

Approval letters were sent out to respective deans for each of the targeted tertiary institutions. Upon receipt of the approval notice for the study to be done, packets containing an introduction letter including confidentiality issues, demographic data form, SWB instrument, OSI-R instrument, QOLI instrument, and return envelope were mailed to the respective chairpersons at each individual university participating in the study (see Appendix A). Upon receiving completed questionnaires they were scored and recorded and placed into a database. Follow-up letters were sent to remind chairpersons that their responses were needed in an effort to increase the response rate.

**Data Analysis**

This section gives the rationale for using statistical procedures, and gives directions in regard to how data were analyzed in order to answer the four research questions under investigation in this study.

Question 1: *What selected Strain variables are related to Spiritual Well-being*
variables as measured by the OSI-R and SWB inventories among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division?

From question 1 the following hypotheses were generated:

Hypothesis 1: There is significant relationship between religiosity and the four OSI-R variables among chairpersons of the selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 2: There is significant relationship between existential well-being and the four OSI-R variables among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Regression analysis was used to determine the relationship between Spiritual Well-Being and the four independent variables of the OSI-R of chairpersons of Seventh-day Adventist tertiary institutions in the North American Division. All hypotheses were tested at the 0.05 level. The 0.05 level was selected rather than the 0.01 level to control for the inflation of the Type II error.

Question 2: What selected variables of the Quality of Life Inventory are related to Strain variables as measured by the OSI-R among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division?

From question 2 the following hypotheses were generated:

Hypothesis 3: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the vocational strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.
Hypothesis 4: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the vocational strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 5: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the psychological strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 6: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the psychological strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 7: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the interpersonal strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 8: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the interpersonal strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 9: There is a linear combination of the six QOLI satisfaction variables which yields a significant relationship with the physical strain variable among chairpersons
of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 10: There is a linear combination of the six QOLI importance variables which yields a significant relationship with the physical strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 11: There is significant relationship between the 12 QOLI importance and satisfaction variables and the 4 OSI-R strain variables among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 12: There is significant relationship between a linear combination of the six QOLI importance variables and a linear combination of the four OSI-R strain variables among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 13: There is significant relationship between the six QOLI satisfaction variables and a linear combination of the four OSI-R strain variables among chairpersons of selected Seventh-day Adventist Tertiary institutions in the North American Division.

Regression analysis was used to analyze hypotheses 3-10 that were under investigation in research question 2. "This is equivalent to testing the null hypothesis that the population slope is 0" (Norusis, 1997, p. 400). Linear regression analysis allows one to test whether there is a relationship between the independent variables and the dependent variable. Gay (1987) indicated that "relationship studies are conducted in an attempt to gain insight into factors, or variables, that are related to complex variables such as academic achievement, motivation, and self-concepts" (p. 244). This analysis can therefore be considered appropriate for this study seeing the purpose of research question 2 was to
determine the variables that are related to stress. The stepwise procedure used was most appropriate because it is the most commonly used procedure since it removes variables in a model "whose importance diminishes as additional predictors are added or are removed" (Norusis, 1997, p. 461).

Canonical correlations were used to analyze hypotheses 11-13 that were under investigation in research question 2. Canonical correlation is an additional procedure for assessing the relationship between variables. Specifically, this analysis allows us to investigate the relationship between two sets of variables simultaneously. In each set the loadings are ranked with at least approximately 50% of the highest loading of that individual set. In this study, therefore, canonical correlation would be the most appropriate method of analysis.

**Question 3:** *What stress catalyst variables as measured by the SWB and QOLI are related to the OSI-R Strain variables among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division?*

From question 3 the following hypotheses were generated:

Hypothesis 14: There is a linear combination of the stress catalyst variables which yield a significant relationship with the vocational strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 15: There is linear combination of stress catalyst variables which yield a significant multiple relationship with the psychological strain variable among chairpersons of Seventh-day Adventist Tertiary institutions in the North American Division.
Hypothesis 16: There is a linear combination of stress catalyst variables which yield a significant multiple relationship with the interpersonal strain variable among chairpersons of selected Seventh-day Adventist Tertiary institutions in the North American Division.

Hypothesis 17: There is a linear combination of stress catalyst variables which yield a significant relationship with the physical strain variable among chairpersons of selected Seventh-day Adventist tertiary institutions in the North American Division.

Hypothesis 18: There is a significant relationship between a linear combination of the stress catalyst variables and a linear combination of the four OSI-R strain variables among chairpersons of Seventh-day Adventist tertiary institutions in the North American Division.

Regression analysis was used to analyze hypotheses 14-17 that were under investigation in research question 3. “This is equivalent to testing the null hypothesis that the population slope is 0” (Norusis, 1997, p. 400). Linear regression analysis allows one to test whether there is a relationship between the independent variables and the dependent variable. Gay (1987) indicated that “relationship studies are conducted in an attempt to gain insight into factors, or variables, that are related to complex variables such as academic achievement, motivation, and self-concepts” (p. 244). This analysis can therefore be considered appropriate for this study seeing the purpose of research question 3 was to determine the variables that are related to stress. The stepwise procedure used was most appropriate because it is the most commonly used procedure since it removes variables in a model “whose importance diminishes as additional predictors are added or are removed”
Canonical correlation was used to analyze hypothesis 18 that was under investigation in research question 3. Canonical correlation is an additional procedure for assessing the relationship between variables. Specifically, this analysis allows us to investigate the relationship between two sets of variables simultaneously. In each set the loadings are ranked with at least approximately 50% of the highest loading of that individual set. In this study, therefore, canonical correlation would be the most appropriate method of analysis.
CHAPTER 4

DATA ANALYSIS AND RESULTS

Overview of Study

This research study was an attempt to identify relationships between spiritual well-being and quality of life factors on occupational stress experienced among university chairpersons. The study was tasked with understanding whether or not spirituality or quality of life affect stress levels in the study's respondents.

This chapter highlights the demographic information of the chairpersons of Seventh-day Adventist universities in the North American Division. This chapter also presents research findings for the three research questions of this study.

General Characteristics of the Sample

A total of 137 surveys was sent to the participants of the study and 61 were returned, giving a response rate of 45%. The data analysis techniques and findings are discussed separately for each of the research hypotheses and their related measures.

Of the 61 respondents included in this study 75% identified themselves as male, 39% were 51-60 years of age, and 46% indicated being a chairperson for 1-5 years (see Table 2).
Table 2

Frequency and Percentage of Selected Demographic Characteristics of Seventh-day Adventist Chairpersons in Tertiary Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td><strong>Sex</strong></td>
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</tr>
<tr>
<td>Male</td>
<td>46</td>
<td>75</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>25</td>
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<tr>
<td><strong>Age Range in Years</strong></td>
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<td></td>
</tr>
<tr>
<td>20 - 30</td>
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<tr>
<td>31 - 40</td>
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<td>61 - 70</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>71 or More</td>
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<td>2</td>
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<tr>
<td><strong>Number of Years in Department</strong></td>
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<td></td>
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<tr>
<td>1 - 5</td>
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</tr>
<tr>
<td>41 or More</td>
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<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100</td>
</tr>
</tbody>
</table>
null hypothesis, where there was minimal correlation between spiritual well-being and vocational strain.

Table 3

Means, Standard Deviations, and Correlations Between Religiosity and OSI-R Strain Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>OSI-R STRAINS</th>
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<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>1. Vocational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>2. Psychological</td>
<td>0.71</td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Interpersonal</td>
<td>0.59</td>
<td>0.74</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4. Physical</td>
<td>0.44</td>
<td>0.66</td>
<td>0.54</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>5. Religiosity</td>
<td>0.38*</td>
<td>0.25</td>
<td>0.20</td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>

Mean |
16.85 | 17.74 | 18.33 | 19.48 | 17.40 |

Standard Deviation |
4.68 | 5.51 | 5.08 | 6.32 | 8.18 |

*Significant at 0.05.
The results of regression analysis for the four OSI-R strain variables and spiritual well-being showed that vocational strain accounted for 16% of the variance in the religiosity score. The addition of no other strain variable significantly increased the strength of the relationship. This is significant at the 0.05 level, with $F_{(4, 56)} = 2.70$, $p = 0.039$. The best predictor is vocational strain ($\beta = 0.43$). Since $\beta$ was significant the null hypothesis is rejected.

Null Hypothesis 2: There is no significant relationship between existential well-being and the four OSI-R variables of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 4 shows the means, standard deviations, and correlations related to this null hypothesis. There were significant correlations between existential well-being and all four OSI-R strain variables, with vocational strain showing high and the remaining showing moderate correlations.

The results of regression analysis for the four OSI-R strain variables and existential well-being showed that vocational strain accounted for 58% variance in the existential well-being score and the addition of no other strain variable significantly increased the strength of the relationship. This is significant at the 0.05 level with $F_{(4, 56)} = 19.08$, $p = 0.000$. The best predictor is vocational strain with $\beta = 0.48$. Since $\beta$ was significant, the null hypothesis is rejected.

Null Hypothesis 3: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.
Table 4

Means, Standard Deviations, and Correlations Between Existential Well-Being and OSI-R Strain Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vocational</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Psychological</td>
<td>0.71</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Interpersonal</td>
<td>0.59</td>
<td>0.74</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Physical</td>
<td>0.44</td>
<td>0.66</td>
<td>0.54</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Existential Well-being</td>
<td>0.72*</td>
<td>0.67*</td>
<td>0.57*</td>
<td>0.50*</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean</td>
<td>16.85</td>
<td>17.74</td>
<td>18.33</td>
<td>19.48</td>
<td>17.98</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>4.68</td>
<td>5.51</td>
<td>5.08</td>
<td>6.32</td>
<td>7.35</td>
</tr>
</tbody>
</table>

*Significant at 0.05.

Table 5 shows the means, standard deviations, and correlations related to this null hypothesis. There were significant correlations between vocational strain and the six QOLI satisfaction variables, with self-esteem and creativity showing minimal correlation.

The results of regression analysis for the vocational strain variable and the six QOLI satisfaction variables showed that self-esteem satisfaction accounted for 27% of the variance in the vocational strain and the addition of no other satisfaction variable significantly increased the strength of the relationship. This is significant at the 0.05 level with $F_{(6, s)} = 3.40, p = 0.006$. The best predictor is self-esteem satisfaction with $\beta = -0.46$. Since $\beta$ was significant, the null hypothesis is rejected.
### Table 5

**Means, Standard Deviations, and Correlations Between Vocational Strain and QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Satisfaction</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Satisfaction</td>
<td>0.563</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Satisfaction</td>
<td>0.152</td>
<td>0.121</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Satisfaction</td>
<td>0.212</td>
<td>0.363</td>
<td>0.361</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Satisfaction</td>
<td>0.209</td>
<td>0.344</td>
<td>0.227</td>
<td>0.335</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Satisfaction</td>
<td>0.171</td>
<td>0.277</td>
<td>0.477</td>
<td>0.168</td>
<td>0.306</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Vocational Strain</td>
<td>-0.160</td>
<td>-0.449*</td>
<td>-0.174</td>
<td>-0.297</td>
<td>-0.336*</td>
<td>-0.131</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.688</td>
<td>2.098</td>
<td>2.327</td>
<td>1.606</td>
<td>1.688</td>
<td>1.721</td>
<td>16.88</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.62</td>
<td>1.15</td>
<td>0.96</td>
<td>1.53</td>
<td>1.08</td>
<td>1.19</td>
<td>4.68</td>
</tr>
</tbody>
</table>

*Significant at 0.05.

Null Hypothesis 4: There is no linear combination of the six QOLI importance variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 6 shows the means, standard deviations, and correlations related to this null hypothesis. There were no significant correlations between vocational strain and the six QOLI importance variables.
Table 6

Means, Standard Deviations, and Correlations Between Vocational and QOLI Importance Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health Importance</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Self-esteem Importance</td>
<td>0.38</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Goal/Values Importance</td>
<td>0.20</td>
<td>0.21</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Money Importance</td>
<td>0.41</td>
<td>0.31</td>
<td>0.04</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Creativity Importance</td>
<td>0.06</td>
<td>0.28</td>
<td>0.21</td>
<td>-0.13</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Helping Importance</td>
<td>0.10</td>
<td>0.06</td>
<td>0.31</td>
<td>0.02</td>
<td>0.17</td>
<td>1.00</td>
</tr>
<tr>
<td>7</td>
<td>Vocational Strain</td>
<td>0.00</td>
<td>-0.09</td>
<td>-0.03</td>
<td>-0.14</td>
<td>0.18</td>
<td>0.07</td>
</tr>
<tr>
<td>Mean</td>
<td>1.61</td>
<td>1.48</td>
<td>1.70</td>
<td>0.92</td>
<td>1.21</td>
<td>1.44</td>
<td>16.85</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.49</td>
<td>0.57</td>
<td>0.50</td>
<td>0.42</td>
<td>0.61</td>
<td>0.53</td>
<td>4.68</td>
</tr>
</tbody>
</table>

*Significant at 0.05.

The results of regression analysis for the vocational strain variable and the six QOLI importance variables indicated no significant relationships. Therefore, the null hypothesis is retained.

Hypothesis 5: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the psychological strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 7 shows the means, standard deviations, and correlations related to this null
hypothesis. There were significant correlations between psychological strain and five of the six QOLI satisfaction variables with self-esteem having moderate, and health, goals/values, money, and creativity having minimal correlation.

Table 7

Means, Standard Deviations, and Correlations Between Psychological Strain and QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Satisfaction</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Satisfaction</td>
<td></td>
<td>0.563</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Satisfaction</td>
<td>0.152</td>
<td>0.121</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Satisfaction</td>
<td>0.212</td>
<td>0.363</td>
<td>0.361</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Satisfaction</td>
<td>0.209</td>
<td>0.344</td>
<td>0.227</td>
<td>0.335</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Satisfaction</td>
<td>0.171</td>
<td>0.277</td>
<td>0.477</td>
<td>0.168</td>
<td>0.306</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Psychological Strain</td>
<td>-0.389*</td>
<td>-0.548*</td>
<td>-0.342*</td>
<td>-0.382*</td>
<td>-0.358*</td>
<td>-0.297</td>
<td>1.000</td>
</tr>
</tbody>
</table>

| Mean                      | 1.69   | 2.10   | 2.33   | 1.61   | 1.69   | 1.72   | 17.74  |
| Standard Deviation        | 1.62   | 1.15   | 0.96   | 1.53   | 1.09   | 1.19   | 5.51   |

*Significant at 0.05.

Table 8 shows the results of regression analysis of the psychological strain variable and the six QOLI satisfaction variables. As a set, two of the six variables accounted for 41
Table 8

Linear Regression Results for Psychological Strain and the Six QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>26.70</td>
<td>1.81</td>
<td>14.72</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Self-esteem Satisfaction</td>
<td>-1.89</td>
<td>0.65</td>
<td>-0.39</td>
<td>-2.91</td>
<td>0.01</td>
</tr>
<tr>
<td>Goals/values Satisfaction</td>
<td>1.24</td>
<td>0.65</td>
<td>-0.22</td>
<td>-1.92</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.41; F_{(6,54)} = 6.17, p = 0.000.$

% of the variance in the psychological strain score, and the addition of no other satisfaction variable significantly increased the strength of the relationship. This is significant at the 0.05 level. The best predictor is self-esteem satisfaction with $β = -0.39.$ Since $β$ was significant, the null hypothesis is rejected.

Null Hypothesis 6: There is no linear combination of the six QOLI importance variables which yields a significant relationship with the psychological strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 9 shows the means, standard deviations, and correlations related to this null hypothesis. There were no significant correlations between psychological strain and the six QOLI Importance variables.

The results of regression analysis for the vocational strain variable and the six QOLI Importance variables showed no significant relationships. Therefore, the null
Table 9

Means, Standard Deviations, and Correlations Between Psychological Strain and QOLI Importance Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Importance</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Importance</td>
<td>0.383</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Importance</td>
<td>0.200</td>
<td>0.212</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Importance</td>
<td>0.405</td>
<td>0.307</td>
<td>0.042</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Importance</td>
<td>0.062</td>
<td>0.282</td>
<td>0.212</td>
<td>-0.126</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Importance</td>
<td>0.103</td>
<td>0.064</td>
<td>0.314</td>
<td>0.016</td>
<td>0.167</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Psychological Strain</td>
<td>-0.051</td>
<td>-0.066</td>
<td>-0.096</td>
<td>-0.139</td>
<td>0.126</td>
<td>-0.090</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.61</td>
<td>1.48</td>
<td>1.70</td>
<td>0.92</td>
<td>1.21</td>
<td>1.44</td>
<td>17.74</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.49</td>
<td>0.57</td>
<td>0.49</td>
<td>0.42</td>
<td>0.61</td>
<td>0.53</td>
<td>5.51</td>
</tr>
</tbody>
</table>

*Significant at 0.05.

Null Hypothesis 7: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 10 shows the means, standard deviations, and correlations related to this null hypothesis. There was a significant correlation between interpersonal strain and one of the six QOLI satisfaction variables, with self-esteem having a minimal correlation.
Table 10

Means, Standard Deviations, and Correlations Between Interpersonal Strain and QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Satisfaction</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Satisfaction</td>
<td>0.563</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Satisfaction</td>
<td>0.152</td>
<td>0.121</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Satisfaction</td>
<td>0.212</td>
<td>0.363</td>
<td>0.361</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Satisfaction</td>
<td>0.209</td>
<td>0.344</td>
<td>0.227</td>
<td>0.335</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Satisfaction</td>
<td>0.171</td>
<td>0.277</td>
<td>0.477</td>
<td>0.168</td>
<td>0.306</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Interpersonal Strain</td>
<td>-0.247</td>
<td>-0.434*</td>
<td>-0.221</td>
<td>-0.258</td>
<td>-0.274</td>
<td>-0.262</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.69</td>
<td>2.10</td>
<td>2.33</td>
<td>1.61</td>
<td>1.69</td>
<td>1.72</td>
<td>18.33</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.62</td>
<td>1.15</td>
<td>0.96</td>
<td>1.53</td>
<td>1.08</td>
<td>1.19</td>
<td>5.08</td>
</tr>
</tbody>
</table>

*Significant at 0.05.

The regression analysis for the interpersonal strain variable and the six QOLI satisfaction variables showed a significant relationship. Self-esteem satisfaction accounted for 23% of the variance in the interpersonal strain score, and the addition of no other satisfaction variable significantly increased the strength of the relationship. This is significant at the 0.05 level with $F_{(6,54)} = 2.73; p = 0.022$. The best predictor is self-esteem satisfaction ($\beta = -0.36$). Since $\beta$ was significant, the null hypothesis is rejected.
Null Hypothesis 8: There is no linear combination of the six QOLI importance variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 11 shows the means, standard deviations, and correlations related to this null hypothesis. There were no correlations between interpersonal strain and the six QOLI importance variables.

The results of regression analysis for the interpersonal strain variable and the six QOLI Importance variables showed no significant relationships. Therefore the null hypothesis is retained.

Null Hypothesis 9: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 12 shows the means, standard deviations, and correlations related to this null hypothesis. There were significant correlations between physical strain and two of the six QOLI satisfaction variables, with health and self-esteem having minimal correlations.

Table 13 shows the results of regression analysis for the physical strain variable and the six QOLI satisfaction variables. As a set, two of the six variables accounted for 30% of the variance in the physical strain score, and the addition of no other satisfaction variables significantly increased the strength of the relationship. This is significant at the 0.05 level. The best predictor is health satisfaction, with $\beta = -0.32$. 

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Table 11

*Means, Standard Deviations, and Correlations Between Interpersonal Strain and QOLI Importance Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Importance</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Importance</td>
<td>0.383</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Importance</td>
<td>0.200</td>
<td>0.212</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Importance</td>
<td>0.405</td>
<td>0.307</td>
<td>0.042</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Importance</td>
<td>0.062</td>
<td>0.282</td>
<td>0.212</td>
<td>-0.126</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Importance</td>
<td>0.103</td>
<td>0.064</td>
<td>0.314</td>
<td>0.016</td>
<td>0.167</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Interpersonal Strain</td>
<td>0.026</td>
<td>-0.003</td>
<td>-0.147</td>
<td>-0.003</td>
<td>0.160</td>
<td>0.013</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.61</td>
<td>1.48</td>
<td>1.70</td>
<td>0.92</td>
<td>1.21</td>
<td>1.44</td>
<td>18.33</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.49</td>
<td>0.57</td>
<td>0.49</td>
<td>0.42</td>
<td>0.61</td>
<td>0.53</td>
<td>5.08</td>
</tr>
</tbody>
</table>

*Significant at 0.05.
Table 12

Means, Standard Deviations, and Correlations Between Physical Strain and QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health Satisfaction</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem Satisfaction</td>
<td>0.563</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal/Values Satisfaction</td>
<td>0.152</td>
<td>0.121</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Money Satisfaction</td>
<td>0.212</td>
<td>0.363</td>
<td>0.361</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Creativity Satisfaction</td>
<td>0.209</td>
<td>0.344</td>
<td>0.227</td>
<td>0.335</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Helping Satisfaction</td>
<td>0.171</td>
<td>0.277</td>
<td>0.477</td>
<td>0.168</td>
<td>0.306</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>7. Physical Strain</td>
<td>-0.484*</td>
<td>-0.474*</td>
<td>-0.147</td>
<td>-0.230</td>
<td>-0.191</td>
<td>-0.133</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.69</td>
<td>2.10</td>
<td>2.33</td>
<td>1.61</td>
<td>1.69</td>
<td>1.72</td>
<td>19.48</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.62</td>
<td>1.15</td>
<td>0.96</td>
<td>1.53</td>
<td>1.09</td>
<td>1.19</td>
<td>6.32</td>
</tr>
</tbody>
</table>

*Significant at 0.05.
Table 13

Linear Regression Results for Physical Strain and the Six QOLI Satisfaction Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>25.84</td>
<td>2.26</td>
<td>11.45</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Health Satisfaction</td>
<td>-1.21</td>
<td>0.54</td>
<td>-0.31</td>
<td>-2.24</td>
<td>0.03</td>
</tr>
<tr>
<td>Self-esteem Satisfaction</td>
<td>-1.56</td>
<td>0.83</td>
<td>-0.28</td>
<td>-1.88</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Note. \( R^2 = 0.30, F(6, 54) = 3.87, \ p = 0.003. \)

Since \( \beta \) was significant, the null hypothesis is rejected.

Null Hypothesis 10: There is no linear combination of the six QOLI importance variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 14 shows the mean, standard deviations, and correlations related to this null hypothesis. There were no significant correlations between physical strain and the six QOLI importance variables. When regression analysis for the physical strain variable and the six QOLI importance variables was performed, there was no significant relationship, therefore the null hypothesis is retained.

Null Hypothesis 11: There is no significant relationship between the 12 QOLI importance and satisfaction variables and the four OSI-R strain variables of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 15 shows the loadings for the two sets of variables. For set 1, the important variables appear to be self-esteem satisfaction, health satisfaction, creativity satisfaction,
Table 14

*Means, Standard Deviations, and Correlations Between Physical Strain Variable and QOLI Importance Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)*

<table>
<thead>
<tr>
<th>Variables</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Importance</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem Importance</td>
<td>0.383</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal/Values Importance</td>
<td>0.200</td>
<td>0.212</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money Importance</td>
<td>0.405</td>
<td>0.307</td>
<td>0.042</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creativity Importance</td>
<td>0.062</td>
<td>0.282</td>
<td>0.212</td>
<td>-0.126</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helping Importance</td>
<td>0.103</td>
<td>0.064</td>
<td>0.314</td>
<td>0.016</td>
<td>0.167</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Physical Strain</td>
<td>-0.100</td>
<td>0.038</td>
<td>0.014</td>
<td>-0.016</td>
<td>-0.040</td>
<td>-0.044</td>
<td>1.000</td>
</tr>
<tr>
<td>Mean</td>
<td>1.61</td>
<td>1.48</td>
<td>1.70</td>
<td>0.92</td>
<td>1.21</td>
<td>1.44</td>
<td>19.48</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.49</td>
<td>0.57</td>
<td>0.49</td>
<td>0.42</td>
<td>0.61</td>
<td>0.53</td>
<td>6.32</td>
</tr>
</tbody>
</table>

*Significant at 0.05.*
and money satisfaction, with self-esteem satisfaction showing the most importance.

For set 2, all the loadings with the exception of interpersonal strain are important especially psychological strain. This analysis yielded a high canonical correlation of 0.69 \((R^2 = 0.49)\) indicating a moderate relationship between QOLI satisfaction variables and the OSI-R strains; therefore, the null hypothesis is rejected.

Null Hypothesis 12: There is no significant relationship between a linear combination of the six QOLI importance variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist universities in the North American Division.

When canonical analysis was performed there were no significant correlations, thus the null hypothesis is retained.

Null Hypothesis 13: There is no significant relationship between a linear combination of the six QOLI satisfaction variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 16 shows the loading of the two sets of variables. For set 1, the important variables seem to be self-esteem, health, money, and creativity satisfactions, with self-esteem satisfaction showing the most importance. For set 2, all loadings are important, especially psychological strain.

This analysis yielded a high canonical correlation of 0.65 \((R^2 = 0.42)\) indicating a medium relationship between the QOLI satisfaction variables on one hand, and the OSI-R variables on the other hand; thus the null hypothesis was rejected.
Table 15
Canonical Variable Loadings for QOLI Variables as Set 1 and OSI-R Strain Variables as Set 2 of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Set 1</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Importance</td>
<td>-0.076</td>
</tr>
<tr>
<td>Health Satisfaction</td>
<td>-0.526</td>
</tr>
<tr>
<td>(2) Self-esteem Importance</td>
<td>-0.118</td>
</tr>
<tr>
<td>(2) Self-esteem Satisfaction</td>
<td>-0.780</td>
</tr>
<tr>
<td>(1) Goals/Values Importance</td>
<td>-0.112</td>
</tr>
<tr>
<td>Goals/Values Satisfaction</td>
<td>-0.480</td>
</tr>
<tr>
<td>Money Importance</td>
<td>-0.233</td>
</tr>
<tr>
<td>Money Satisfaction</td>
<td>-0.554</td>
</tr>
<tr>
<td>(3) Creativity Importance</td>
<td>-0.187</td>
</tr>
<tr>
<td>Creativity Satisfaction</td>
<td>-0.526</td>
</tr>
<tr>
<td>(4) Helping Importance</td>
<td>-0.118</td>
</tr>
<tr>
<td>Helping Satisfaction</td>
<td>-0.396</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set 2</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Strain</td>
<td>0.771</td>
</tr>
<tr>
<td>(3) Psychological Strain</td>
<td>0.989</td>
</tr>
<tr>
<td>(1) Interpersonal Strain</td>
<td>0.671</td>
</tr>
<tr>
<td>Physical Strain</td>
<td>0.628</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 67.36; \ df = 48; \ p = 0.034$. 

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Table 16

Canonical Variable Loadings for QOLI Satisfaction Variables as Set 1 and OSI-R Strains as Set 2 of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Set 1</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Satisfaction</td>
<td>-0.671  (2)</td>
</tr>
<tr>
<td>Self-esteem Satisfaction</td>
<td>-0.879  (1)</td>
</tr>
<tr>
<td>Goals Satisfaction</td>
<td>-0.491</td>
</tr>
<tr>
<td>Money Satisfaction</td>
<td>-0.578  (3)</td>
</tr>
<tr>
<td>Creativity Satisfaction</td>
<td>-0.535  (4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Strain</td>
<td>0.713   (4)</td>
</tr>
<tr>
<td>Psychological Strain</td>
<td>0.984   (1)</td>
</tr>
<tr>
<td>Interpersonal Strain</td>
<td>0.723   (3)</td>
</tr>
<tr>
<td>Physical Strain</td>
<td>0.780   (2)</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 43.9; \ df = 24; \ p = 0.008.$

Null Hypothesis 14: There is no linear combination of the stress catalyst variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 17 shows the means, standard deviations, and correlations related to this null hypothesis. There were correlations between vocational strain and stress catalyst variables, with existential well-being having high correlation, while self-esteem satisfaction, money satisfaction, creativity satisfaction, creativity importance, health satisfaction, and religiosity showed moderate to minimal correlations.
Table 18 shows the regression analysis for the vocational strain variable and stress catalyst variables where there were significant relationships. As a set, 4 of the 14 variables accounted for 71% of the variance in the vocational strain score, and the addition of no other stress catalyst variable significantly increased the strength of the relationship. The best predictor is existential well-being with $\beta = 0.78$. This is significant at the 0.05 level. Since $\beta$ is significant, the null hypothesis is rejected.

Null Hypothesis 15: There is no linear combination of the stress catalyst variables which yields a significant relationship with the psychological strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 19 shows the means, standard deviations, and correlations related to this null hypothesis. There were correlations between psychological strain and the stress catalyst variables with existential well-being and self-esteem satisfaction having high correlation, whereas health, goals/values, money, creativity, helping satisfactions, helping and creativity importance, and religiosity have minimal correlation.

Table 20 shows the regression analysis for the psychological strain variable and the stress catalyst variables where there were significant relationships. As a set, 5 of the 14 variables accounted for 71% of the variance in the psychological strain score, and the addition of no other stress catalyst variable significantly increased the strength of the relationship.

The best predictor is existential well-being with $\beta = 0.69$. This is significant at the 0.05 level. Since $\beta$ is significant, the null hypothesis is rejected.
Table 17

Means, Standard Deviations, and Correlations Between Vocational Strain Variable and Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th></th>
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<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Religious Well-being</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>2-Existential Well-being</td>
<td>0.625</td>
<td>1.000</td>
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<td></td>
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</tr>
<tr>
<td>3-Health Importance</td>
<td>-0.043</td>
<td>0.046</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4-Health Satisfaction</td>
<td>-0.352</td>
<td>-0.400</td>
<td>0.178</td>
<td>1.000</td>
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</tr>
<tr>
<td>5-Self-esteem Importance</td>
<td>-0.209</td>
<td>-0.059</td>
<td>0.383</td>
<td>0.001</td>
<td>1.000</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6-Self-esteem Satisfaction</td>
<td>-0.517</td>
<td>-0.550</td>
<td>-0.107</td>
<td>0.563</td>
<td>0.234</td>
<td>1.000</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7-Goals/Values Importance</td>
<td>-0.156</td>
<td>-0.169</td>
<td>0.200</td>
<td>-0.033</td>
<td>0.212</td>
<td>0.052</td>
<td>1.000</td>
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</tr>
<tr>
<td>8-Goals/Values Satisfaction</td>
<td>-0.052</td>
<td>-0.164</td>
<td>-0.110</td>
<td>0.152</td>
<td>-0.077</td>
<td>0.121</td>
<td>0.312</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9-Money Importance</td>
<td>-0.039</td>
<td>-0.014</td>
<td>0.405</td>
<td>0.109</td>
<td>0.307</td>
<td>0.051</td>
<td>0.042</td>
<td>0.026</td>
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</tr>
<tr>
<td>10-Money Satisfaction</td>
<td>-0.235</td>
<td>-0.192</td>
<td>-0.054</td>
<td>0.212</td>
<td>0.008</td>
<td>0.363</td>
<td>-0.002</td>
<td>0.361</td>
<td>0.001</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-Creativity Importance</td>
<td>0.028</td>
<td>0.003</td>
<td>0.062</td>
<td>-0.067</td>
<td>0.282</td>
<td>-0.007</td>
<td>0.212</td>
<td>-0.036</td>
<td>-0.126</td>
<td>-0.159</td>
<td>1.000</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12-Creativity Satisfaction</td>
<td>-0.071</td>
<td>-0.194</td>
<td>-0.046</td>
<td>0.209</td>
<td>-0.053</td>
<td>0.344</td>
<td>0.043</td>
<td>0.227</td>
<td>-0.057</td>
<td>0.335</td>
<td>0.253</td>
<td>1.000</td>
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</tr>
<tr>
<td>13-Helping Importance</td>
<td>-0.167</td>
<td>0.103</td>
<td>0.066</td>
<td>0.064</td>
<td>0.009</td>
<td>0.314</td>
<td>-0.060</td>
<td>0.016</td>
<td>-0.192</td>
<td>0.167</td>
<td>-0.218</td>
<td>1.000</td>
<td></td>
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</tr>
<tr>
<td>14-Helping Satisfaction</td>
<td>-0.030</td>
<td>-0.180</td>
<td>-0.191</td>
<td>0.171</td>
<td>0.027</td>
<td>0.277</td>
<td>0.056</td>
<td>0.477</td>
<td>-0.047</td>
<td>0.168</td>
<td>0.014</td>
<td>0.306</td>
<td>0.225</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>15-Vocational Strain</td>
<td>0.377*</td>
<td>0.716*</td>
<td>0.003*</td>
<td>-0.160</td>
<td>-0.093</td>
<td>-0.449*</td>
<td>-0.026</td>
<td>-0.174</td>
<td>-0.142</td>
<td>-0.297*</td>
<td>0.175*</td>
<td>-0.336*</td>
<td>0.067</td>
<td>-0.131</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Means

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>4</th>
<th>5</th>
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</tr>
</thead>
<tbody>
<tr>
<td>17.40</td>
<td>17.98</td>
<td>1.61</td>
<td>1.69</td>
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<td>1.44</td>
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<td>Standard Deviations</td>
<td>8.18</td>
<td>7.35</td>
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<td>1.15</td>
<td>0.49</td>
<td>0.96</td>
<td>0.42</td>
<td>1.53</td>
<td>0.61</td>
<td>1.09</td>
<td>0.53</td>
<td>1.19</td>
<td>4.68</td>
</tr>
</tbody>
</table>

*Significant at 0.05.
Table 18

Linear Regression Results for Vocational Strain Variable and Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America ($N = 61$)

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
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<td>3.25</td>
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</tr>
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<td>Existential Well-being</td>
<td>-0.50</td>
<td>0.07</td>
<td>0.78</td>
<td>6.84</td>
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<tr>
<td>Health Satisfaction</td>
<td>0.86</td>
<td>0.32</td>
<td>0.30</td>
<td>2.67</td>
</tr>
<tr>
<td>Creativity Satisfaction</td>
<td>-1.26</td>
<td>0.46</td>
<td>-0.29</td>
<td>-2.72</td>
</tr>
<tr>
<td>Creativity Importance</td>
<td>1.98</td>
<td>0.76</td>
<td>0.26</td>
<td>2.61</td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.71$; $F_{(14,46)} = 7.86$; $p = 0.000$;

*Significant at 0.05.

Null Hypothesis 16: There is no linear combination of the stress catalyst variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 21 shows the means, standard deviations and correlations related to this null hypothesis. There were correlations between interpersonal strain and the stress catalyst variables, with existential well-being having moderate correlation, whereas self-esteem, money, creativity, helping satisfactions, and religiosity had minimal correlation.
Table 19

Means, Standard Deviations, and Correlations Between Psychological Strain Variable and the Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>12</th>
<th>13</th>
<th>14</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1- Religious Well-Being</td>
<td>1.000</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>2- Existential Well-Being</td>
<td>0.625</td>
<td>1.000</td>
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</tr>
<tr>
<td>3- Health Importance</td>
<td>-0.043</td>
<td>0.046</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4- Health Satisfaction</td>
<td>-0.352</td>
<td>-0.400</td>
<td>0.178</td>
<td>1.000</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5- Self-esteem Importance</td>
<td>-0.209</td>
<td>-0.059</td>
<td>0.383</td>
<td>0.001</td>
<td>1.000</td>
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<td></td>
</tr>
<tr>
<td>6- Self-esteem Satisfaction</td>
<td>-0.517</td>
<td>-0.550</td>
<td>-0.107</td>
<td>0.563</td>
<td>0.234</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7- Goals/values Importance</td>
<td>-0.156</td>
<td>-0.169</td>
<td>0.200</td>
<td>-0.033</td>
<td>0.212</td>
<td>0.052</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8- Goals/values satisfaction</td>
<td>0.052</td>
<td>-0.164</td>
<td>-0.110</td>
<td>0.152</td>
<td>-0.077</td>
<td>0.121</td>
<td>0.312</td>
<td>1.000</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9- Money Importance</td>
<td>-0.039</td>
<td>-0.014</td>
<td>0.405</td>
<td>0.109</td>
<td>0.307</td>
<td>0.051</td>
<td>0.042</td>
<td>0.026</td>
<td>1.000</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10- Money Satisfaction</td>
<td>-0.235</td>
<td>-0.192</td>
<td>-0.054</td>
<td>0.212</td>
<td>0.008</td>
<td>0.363</td>
<td>-0.002</td>
<td>0.361</td>
<td>0.001</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11- Creativity Importance</td>
<td>0.028</td>
<td>0.003</td>
<td>0.062</td>
<td>-0.067</td>
<td>0.282</td>
<td>-0.007</td>
<td>0.212</td>
<td>-0.036</td>
<td>-0.126</td>
<td>-0.159</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12- Creativity Satisfaction</td>
<td>-0.021</td>
<td>-0.194</td>
<td>-0.046</td>
<td>0.209</td>
<td>-0.053</td>
<td>0.344</td>
<td>0.043</td>
<td>0.227</td>
<td>-0.057</td>
<td>-0.335</td>
<td>-0.253</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13- Helping Importance</td>
<td>-0.263</td>
<td>-0.167</td>
<td>0.103</td>
<td>0.066</td>
<td>0.064</td>
<td>0.009</td>
<td>0.314</td>
<td>-0.060</td>
<td>0.016</td>
<td>-0.192</td>
<td>0.167</td>
<td>-0.218</td>
<td>1.000</td>
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</tr>
<tr>
<td>14- Helping Satisfaction</td>
<td>-0.030</td>
<td>-0.180</td>
<td>-0.191</td>
<td>0.171</td>
<td>0.027</td>
<td>0.277</td>
<td>0.056</td>
<td>0.477</td>
<td>-0.047</td>
<td>0.168</td>
<td>0.014</td>
<td>0.306</td>
<td>0.225</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>15- Psychological Strain</td>
<td>0.246</td>
<td>0.668*</td>
<td>-0.051</td>
<td>-0.389*</td>
<td>-0.066</td>
<td>-0.548*</td>
<td>-0.096</td>
<td>-0.342*</td>
<td>-0.139</td>
<td>-0.382*</td>
<td>0.126*</td>
<td>-0.358*</td>
<td>-0.906*</td>
<td>-0.297*</td>
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</tr>
</tbody>
</table>

Means: 17.40 17.98 1.61 1.69 1.49 2.10 1.70 2.33 0.92 1.61 1.21 1.69 1.44 1.72 17.74

Standard Deviation: 8.18 7.35 0.49 1.62 0.57 1.15 0.49 0.96 0.42 1.53 0.61 1.09 0.53 0.19 5.51

* Significant at 0.05.
Table 20

Linear Regression Results for Psychological Strain Variable and Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America ($N = 61$)

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
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<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
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</thead>
<tbody>
<tr>
<td>Constant</td>
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<tr>
<td>Existential Well-being</td>
<td>0.38</td>
<td>0.08</td>
<td>0.69</td>
<td>6.09</td>
<td>0.00</td>
</tr>
<tr>
<td>Religiosity</td>
<td>-0.28</td>
<td>0.08</td>
<td>-0.42</td>
<td>-3.54</td>
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<tr>
<td>Self-esteem Satisfaction</td>
<td>-1.35</td>
<td>0.64</td>
<td>-0.28</td>
<td>-2.12</td>
<td>0.04</td>
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<tr>
<td>Creativity Importance</td>
<td>1.72</td>
<td>0.88</td>
<td>0.19</td>
<td>1.95</td>
<td>0.05</td>
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<tr>
<td>Helping Importance</td>
<td>2.36</td>
<td>1.08</td>
<td>-0.23</td>
<td>-2.19</td>
<td>0.03</td>
</tr>
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</table>

Note. $R^2 = 0.71$; $F_{(14,46)} = 8.18$; $p = 0.000$.

Table 22 shows the regression analysis for the interpersonal strain variable and the stress catalyst variables where there were significant relationships. As a set, 2 of the 14 variables account for 49% of the variance in the interpersonal strain score, and the addition of no other stress catalyst variable significantly increased the strength of the relationship. The best predictor is existential well-being with $\beta = 0.63$. Since $\beta$ is significant at the 0.05 level, the null hypothesis is rejected.

Null Hypothesis 17: There is no linear combination of the stress catalyst variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 23 shows the means, standard deviations, and correlations related to this null hypothesis. There were correlations between physical strain and the stress catalyst variables, with existential well-being having moderate correlation, whereas self-esteem and
Table 21

Means, Standard Deviations, and Correlations Between Interpersonal Strain Variable and the Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>13</th>
<th>14</th>
<th>15</th>
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<tbody>
<tr>
<td>1- Religious Well-being</td>
<td>1.000</td>
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</tr>
<tr>
<td>2- Existential Well-being</td>
<td>0.625</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3- Health Importance</td>
<td>-0.043</td>
<td>0.046</td>
<td>1.000</td>
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<td></td>
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</tr>
<tr>
<td>4- Health Satisfaction</td>
<td>-0.352</td>
<td>-0.400</td>
<td>0.178</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5- Self-esteem Importance</td>
<td>-0.209</td>
<td>-0.059</td>
<td>0.383</td>
<td>0.001</td>
<td>1.000</td>
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<td></td>
</tr>
<tr>
<td>6- Self-esteem Satisfaction</td>
<td>-0.517</td>
<td>-0.550</td>
<td>-0.107</td>
<td>0.563</td>
<td>0.234</td>
<td>1.000</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7- Goals/values Importance</td>
<td>-0.156</td>
<td>-0.169</td>
<td>0.200</td>
<td>-0.033</td>
<td>0.212</td>
<td>0.052</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8- Goals/values satisfaction</td>
<td>0.052</td>
<td>-0.164</td>
<td>-0.110</td>
<td>0.152</td>
<td>-0.077</td>
<td>0.121</td>
<td>0.312</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9- Money Importance</td>
<td>-0.039</td>
<td>-0.014</td>
<td>0.405</td>
<td>0.109</td>
<td>0.307</td>
<td>0.051</td>
<td>0.042</td>
<td>0.026</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10- Money Satisfaction</td>
<td>-0.235</td>
<td>-0.192</td>
<td>-0.054</td>
<td>0.212</td>
<td>0.008</td>
<td>0.363</td>
<td>-0.002</td>
<td>0.361</td>
<td>0.001</td>
<td>1.000</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>11- Creativity Importance</td>
<td>0.028</td>
<td>0.003</td>
<td>0.062</td>
<td>-0.067</td>
<td>0.282</td>
<td>-0.007</td>
<td>0.212</td>
<td>-0.036</td>
<td>-0.126</td>
<td>-0.159</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12- Creativity Satisfaction</td>
<td>-0.021</td>
<td>-0.194</td>
<td>-0.046</td>
<td>0.209</td>
<td>-0.053</td>
<td>0.344</td>
<td>0.043</td>
<td>0.227</td>
<td>-0.057</td>
<td>0.335</td>
<td>0.253</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13- Helping Importance</td>
<td>-0.263</td>
<td>-0.167</td>
<td>0.103</td>
<td>0.066</td>
<td>0.064</td>
<td>0.009</td>
<td>0.314</td>
<td>-0.060</td>
<td>0.016</td>
<td>-0.192</td>
<td>0.167</td>
<td>-0.218</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14- Helping Satisfaction</td>
<td>-0.030</td>
<td>-0.180</td>
<td>-0.019</td>
<td>0.171</td>
<td>0.027</td>
<td>0.277</td>
<td>0.056</td>
<td>0.477</td>
<td>-0.047</td>
<td>0.168</td>
<td>0.014</td>
<td>0.306</td>
<td>0.225</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>15- Interpersonal Strain</td>
<td>0.200*</td>
<td>0.572*</td>
<td>0.026</td>
<td>-0.247</td>
<td>-0.003</td>
<td>0.434*</td>
<td>-0.147</td>
<td>-0.221</td>
<td>-0.003</td>
<td>0.258*</td>
<td>0.160</td>
<td>-0.274*</td>
<td>0.013</td>
<td>-0.262*</td>
<td>1.000</td>
</tr>
<tr>
<td>Means</td>
<td>17.40</td>
<td>17.98</td>
<td>1.61</td>
<td>1.69</td>
<td>1.48</td>
<td>2.10</td>
<td>1.70</td>
<td>2.33</td>
<td>0.92</td>
<td>1.61</td>
<td>1.21</td>
<td>1.69</td>
<td>1.44</td>
<td>1.72</td>
<td>18.33</td>
</tr>
<tr>
<td>Standard Deviations</td>
<td>8.18</td>
<td>7.35</td>
<td>0.49</td>
<td>1.62</td>
<td>0.57</td>
<td>1.15</td>
<td>0.49</td>
<td>0.96</td>
<td>0.42</td>
<td>1.53</td>
<td>0.61</td>
<td>1.09</td>
<td>0.53</td>
<td>1.19</td>
<td>5.08</td>
</tr>
</tbody>
</table>

*Significant at 0.05.
Table 22

*Linear Regression Results for Interpersonal Strain Variable and the Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>17.36</td>
<td>4.43</td>
<td>3.92</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Existential Well-being</td>
<td>0.44</td>
<td>0.10</td>
<td>0.63</td>
<td>4.17</td>
<td>0.00</td>
</tr>
<tr>
<td>Religiosity</td>
<td>-0.20</td>
<td>0.10</td>
<td>-0.33</td>
<td>-2.06</td>
<td>0.05</td>
</tr>
</tbody>
</table>

*Note. R² = 0.49; F₁₄,₄₆ = 3.12; p = 0.002.*

health satisfactions had minimal correlation.

Table 24 shows the regression analysis for the physical strain variable and the stress catalyst variables where there were significant relationships. As a set, 2 of the 14 variables accounted for 45% of the variance in the physical strain score, and the addition of no other stress catalyst variable significantly increased the strength of the relationship. The best predictor is existential well-being with $\beta = 0.31$. Since $\beta$ is significant at the 0.05 level, the null hypothesis is rejected.

Null Hypothesis 18: There is no significant relationship between a linear combination of the stress catalyst variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist universities in the North American Division.

Table 25 shows the loading of the two sets of variables. For set 1, the important variables seem to be existential well-being, religiosity, self-esteem, and health.
### Table 23

**Means, Standard Deviations, and Correlations Between Physical Strain and the Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religious Well-being</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Existential Well-being</td>
<td>0.635</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Health Importance</td>
<td>-0.04</td>
<td>0.05</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Health Satisfaction</td>
<td>-0.35</td>
<td>-0.40</td>
<td>0.18</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Self-esteem Importance</td>
<td>-0.21</td>
<td>-0.06</td>
<td>0.38</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Self-esteem Satisfaction</td>
<td>-0.52</td>
<td>-0.55</td>
<td>-0.11</td>
<td>0.56</td>
<td>0.23</td>
<td>1.00</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Goals/values Importance</td>
<td>-0.16</td>
<td>-0.17</td>
<td>0.20</td>
<td>-0.03</td>
<td>0.21</td>
<td>0.05</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Goals/values satisfaction</td>
<td>0.05</td>
<td>-0.16</td>
<td>-0.11</td>
<td>0.15</td>
<td>-0.08</td>
<td>0.12</td>
<td>0.31</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Money Importance</td>
<td>-0.04</td>
<td>-0.01</td>
<td>0.41</td>
<td>0.11</td>
<td>0.31</td>
<td>0.05</td>
<td>0.04</td>
<td>0.03</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Money Satisfaction</td>
<td>-0.24</td>
<td>-0.19</td>
<td>-0.05</td>
<td>0.21</td>
<td>0.01</td>
<td>0.36</td>
<td>-0.00</td>
<td>0.36</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Creativity Importance</td>
<td>0.03</td>
<td>0.00</td>
<td>0.06</td>
<td>-0.07</td>
<td>0.28</td>
<td>-0.01</td>
<td>0.21</td>
<td>-0.04</td>
<td>-0.13</td>
<td>-0.16</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Creativity Satisfaction</td>
<td>-0.02</td>
<td>-0.19</td>
<td>-0.05</td>
<td>0.21</td>
<td>-0.05</td>
<td>0.34</td>
<td>0.04</td>
<td>0.23</td>
<td>-0.06</td>
<td>0.34</td>
<td>0.25</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Helping Importance</td>
<td>-0.26</td>
<td>-0.17</td>
<td>0.10</td>
<td>0.07</td>
<td>0.06</td>
<td>0.01</td>
<td>0.31</td>
<td>-0.06</td>
<td>0.02</td>
<td>-0.19</td>
<td>0.17</td>
<td>-0.22</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Helping Satisfaction</td>
<td>-0.03</td>
<td>-0.18</td>
<td>-0.19</td>
<td>0.17</td>
<td>0.03</td>
<td>0.28</td>
<td>0.06</td>
<td>0.48</td>
<td>-0.05</td>
<td>0.17</td>
<td>0.01</td>
<td>-0.31</td>
<td>0.23</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>15. Physical Strain</td>
<td>0.25</td>
<td>0.50*</td>
<td>-0.10</td>
<td>-0.48*</td>
<td>0.04</td>
<td>-0.47</td>
<td>0.01</td>
<td>-0.15</td>
<td>-0.02</td>
<td>-0.23</td>
<td>-0.04</td>
<td>-0.19</td>
<td>-0.04</td>
<td>-0.13</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Means

|          | 17.40 | 17.98 | 1.61  | 1.69  | 1.48  | 2.10  | 1.70  | 2.33  | 0.92  | 1.61  | 1.21  | 1.69  | 1.44  | 1.72  | 19.48  |

Standard Deviations

|          | 8.18  | 7.35  | 0.49  | 1.62  | 0.57  | 1.15  | 0.49  | 0.96  | 0.42  | 1.53  | 0.61  | 1.09  | 0.53  | 1.19  | 6.32   |

*Significant at 0.05
Table 24

Linear Regression Results for Physical Strain and the Stress Catalyst Variables of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>22.07</td>
<td>5.73</td>
<td>3.85</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Existential Well-Being</td>
<td>0.36</td>
<td>0.14</td>
<td>0.42</td>
<td>2.66</td>
<td>0.01</td>
</tr>
<tr>
<td>Self-esteem Satisfaction</td>
<td>-1.91</td>
<td>1.02</td>
<td>-0.35</td>
<td>-1.88</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.45$; $F_{(14, 46)} = 2.64$; $p = 0.007$, *Significant at 0.05.

satisfactions, with existential well-being showing the most importance.

For set 2, all loadings are important especially vocational and psychological strain.

This analysis yielded a high canonical correlation of 0.88 ($R^2 = 0.78$) indicating a strong relationship between the stress catalyst variables on one hand, and the OSI-R strain variables on the other hand; therefore the null hypothesis is rejected.

Summary and Interpretation of the Hypothesis Tests

Hypothesis 1: There is no significant relationship between religiosity and the four OSI-R strain variables of chairpersons of Seventh-Day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced higher spiritual well-being tended to experience a higher vocational strain level.
Table 25

Canonical Variable Loadings for Stress Catalyst Variables as Set 1 and OSI-R Strains as Set 2 of Chairpersons of Tertiary Seventh-day Adventist Institutions in North America (N = 61)

<table>
<thead>
<tr>
<th>Set 1</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>0.367 (4)</td>
</tr>
<tr>
<td>Existential Well-Being</td>
<td>0.839 (1)</td>
</tr>
<tr>
<td>Health Importance</td>
<td>0.017</td>
</tr>
<tr>
<td>Health Satisfaction</td>
<td>-0.304 (3)</td>
</tr>
<tr>
<td>Self-esteem Importance</td>
<td>-0.104</td>
</tr>
<tr>
<td>Self-esteem Satisfaction</td>
<td>-0.595 (2)</td>
</tr>
<tr>
<td>Goals Importance</td>
<td>-0.090</td>
</tr>
<tr>
<td>Goals Satisfaction</td>
<td>0.324</td>
</tr>
<tr>
<td>Money Importance</td>
<td>-0.174</td>
</tr>
<tr>
<td>Money Satisfaction</td>
<td>0.415</td>
</tr>
<tr>
<td>Creativity Importance</td>
<td>0.203</td>
</tr>
<tr>
<td>Creativity Satisfaction</td>
<td>-0.429</td>
</tr>
<tr>
<td>Helping Importance</td>
<td>-0.013</td>
</tr>
<tr>
<td>Helping Satisfaction</td>
<td>-0.273</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set 2</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Strain</td>
<td>0.922 (1)</td>
</tr>
<tr>
<td>Psychological Strain</td>
<td>0.920 (2)</td>
</tr>
<tr>
<td>Interpersonal Strain</td>
<td>0.737 (3)</td>
</tr>
<tr>
<td>Physical Strain</td>
<td>0.532 (4)</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 120.27; df = 56; p = 0.000.$

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Hypothesis 2: There is no significant relationship between existential well-being and the four OSI-R variables of chairpersons of Seventh-Day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced higher existential well-being tended to experience higher levels of vocational, interpersonal, and physical strain levels, when taken separately. There were no group variables which together related more strongly to existential well-being than did vocational strain alone.

Hypothesis 3: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower self-esteem satisfaction tended to experience higher levels of vocational strain. However, the addition of no other satisfaction variable significantly increased the relationship.

Hypothesis 4: There is no linear combination of the six QOLI importance variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

There is no linear combination of the six QOLI importance variables which yields a significant relationship with the vocational strain variable of chairpersons of tertiary SDA institutions. The hypothesis was retained.

Hypothesis 5: There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the psychological strain variable of chairpersons
of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower self-esteem satisfaction and higher goals/values satisfaction tended to experience higher levels of psychological strain.

_Hypothesis 6:_ There is no linear combination of the six QOLI importance variables which yields a significant relationship with the psychological strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was retained

_Hypothesis 7:_ There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower self-esteem satisfaction tended to experience higher interpersonal strain levels. The addition of no further satisfaction variable significantly increased the relationship.

_Hypothesis 8:_ There is no linear combination of the six QOLI importance variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was retained.

_Hypothesis 9:_ There is no linear combination of the six QOLI satisfaction variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower health
satisfaction and self-esteem satisfaction tended to experience higher levels of physical strain.

*Hypothesis 10:* There is no linear combination of the six QOLI importance variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was retained.

*Hypothesis 11:* There is no significant relationship between the twelve QOLI importance and satisfaction variables and the four OSI-R strain variables of chairpersons of Seventh-Day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower levels of self-esteem, health, money, and creativity satisfaction tended to experience higher levels of psychological, physical, vocation and interpersonal strain.

*Hypothesis 12:* There is no significant relationship between a linear combination of the six QOLI importance variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis is retained.

*Hypothesis 13:* There is no significant relationship between a linear combination of the six QOLI satisfaction variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower levels of
self-esteem, health, money and creativity satisfaction tended to experience higher levels of psychological, physical, interpersonal and vocational strain.

Hypothesis 14: There is no linear combination of the stress catalyst variables which yields a significant relationship with the vocational strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower existential well-being and creativity satisfaction and higher creativity importance and health satisfaction tended to experience higher levels of vocational strain.

Hypothesis 15: There is no linear combination of the stress catalyst variables which yields a significant relationship with the psychological strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced lower religiosity and self-esteem satisfaction and higher existential well-being, helping importance and creativity importance tended to experience higher levels of psychological strain.

Hypothesis 16: There is no linear combination of the stress catalyst variables which yields a significant relationship with the interpersonal strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced higher existential well-being and lower religiosity tended to experience higher levels of interpersonal strain.

Hypothesis 17: There is no linear combination of the stress catalyst variables which yields a significant relationship with the physical strain variable of chairpersons of Seventh-day Adventist Universities in the North American Division.
The null hypothesis was rejected. Chairpersons who experienced higher existential well-being and lower self-esteem satisfaction tended to experience higher levels of physical strain.

*Hypothesis 18:* There is no significant relationship between a linear combination of the stress catalyst variables and a linear combination of the four OSI-R strain variables of chairpersons of Seventh-day Adventist Universities in the North American Division.

The null hypothesis was rejected. Chairpersons who experienced higher levels of existential well-being and religiosity and lower levels of self-esteem satisfaction and health satisfaction tended to experience higher levels of vocational, psychological, interpersonal and physical strain.
CHAPTER 5

DISCUSSION AND CONCLUSIONS

Overview of Study

The purpose of this study was to identify if there is a relationship between spiritual well-being and quality of life factors and stress levels in chairpersons in Seventh-day Adventist universities. Specifically this study investigated the impact of: (a) spiritual well-being, (b) existential well-being, (c) health importance, (d) health satisfaction, (e) self-esteem importance, (f) self-esteem satisfaction, (g) goals importance, (h) goals satisfaction, (i) money importance, (j) money satisfaction, (k) creativity importance, (l) creativity satisfaction, (m) helping importance, and (n) helping satisfaction on vocational, psychological, interpersonal, and physical strain levels in the SDA chairpersons surveyed.

Overview of Literature

Stress, like pain, begins at birth and remains common to the human condition throughout life, and it is a factor in the experience of every human being who ever lived. It is not merely universal, it is endemic and omnipresent. In the timing of our biological systems, normal stress is necessary and vital. Through variations in the themes of fight or flight, stress reactions mobilize us to adapt to changing stimuli (Stein, 1983).

According to Humphrey (1998), there is no solid agreement regarding the
derivation of stress; however, he posits that in essence stress can be considered as any factor acting internally or externally that makes it difficult to adapt, and that induces increased effort on the part of the individual to maintain a state of equilibrium between himself or herself and the external environment.

The Spiritual Well-Being Scale (SWBS) has been utilized in a number of different studies to measure spiritual and existential well-being levels in subjects. Notably it has been used recently in a few studies which demonstrate its continued value in research. Fender, Wilson and Staton (2004) used the scale in their study of drug users. They studied Black and White incarcerated men in their study and attempted to discern whether or not spiritual well-being played a role in the disparity of incarceration rates among the two populations. Their results suggest that higher levels of spirituality correlated with higher levels of power and self-satisfaction.

Another study (Fee & Ingram, 2004) included the SWBS as a comparative tool with the Holy Spirit Questionnaire and the Spiritual Assessment Inventory. The study concluded that all three measurement tools had significant cross correlations and that certain areas of religious, existential well-being, and spiritual maturity were significantly related to knowledge of the Holy Spirit.

Davis, Kerr, and Kurpus. (2003) also used the SWBS in their study concerning anxiety and spirituality in at-risk youth. Their research found that higher spiritual well-being, existential well-being, religious well-being, and intrinsic religious orientation in males were consistent with lower anxiety levels. They concluded that spiritual well-being and female gender were the best predictors of anxiety levels in their study.
The OSI-R was utilized by Brown et al. (1986) in their study of 268 faculty and student affairs staff where they found that women reported higher strain scores than men in the study when investigating the occupational environment.

Kaunitz, Spokane, Lissitz, and Strein (1986) investigated student teachers and their stress levels and found that those who could not separate personal stress from professional stress reported higher strain scores on the OSI-R than those teachers who were able to separate the two forms of stress. Sullivan (1991) researched 120 university employees in the areas of stress, strain, and coping and concluded that as personal resources increased, personal strain and occupation role issues decreased. Richard and Krieshok (1989) examined the effects of academic rank and gender on strain, and found that strain was experienced differently by men and women. Strain scores decreased for men as academic rank increased, whereas the reverse was true for women in the study.

Frisch (1992, 1993) examined the QOLI in problem assessment and treatment planning for cognitive therapy of depression. He suggests that it is a useful tool in helping to understand more accurately the problem areas of clients and for developing more complete treatment plans for them. His follow-up study, which investigated outcome evaluation of cognitive behavioral assessment, found it valuable to clinicians in evaluating the client outcomes.

Within the past 10 to 15 years, researchers have been focusing on stress in the workplace. Humphrey (1998) emphasized that stress on the job could be described simply as various degrees of incapability between the individual and his or her work environment. Stress in organizations is of concern to both managers and professionals because of the
adverse consequences and costs associated with job strain and job distress (Quick et al., 1997). There seems to be no question that job stress has reached worldwide epidemic proportions. In fact, a 1993 newsletter of the American Institute of Stress made such a pronouncement with the statement that “a variety of surveys confirm that occupational pressures represent the leading source of stress for adult Americans and that the problem has escalated progressively over the past decade” (Humphrey, 1998, p. 24).

More recently there has been an important focus on the health consequences of stress in the workplace, both out of concern for individuals and organizations. This concern is founded on the idea that the intense or persistent stimulation of the stress response without sufficient rest or recovery can result in a host of health problems (Quick et al., 1986). According to Murphy and Hurrell (1987), research on health consequences in occupational stress was motivated by the establishment of the National Institute for Occupational Safety and Health (NIOSH) by the Occupational and Health Act of 1970. Its primary goal was to ensure that America’s working public were functioning under safe conditions. This involved monitoring psychological, behavioral, and motivational factors pertaining to health and safety.

The literature documents (Edwards, 1999; Gmelch, 2000) that chairs of academic departments in the 1990s onward will be expected to perform in an increasingly complex, diverse, and changing environment, with ever-increasing expectations from the institution and the faculty. Numerous studies (McCarty & Reyes, 1987; Seagren et al., 1993) have been conducted on the tasks, activities, roles, and responsibilities of departmental chairs, but despite researchers’ abilities to identify tasks and job-related duties, the chair’s role
continues to be ambiguous, unclear in terms of authority, and unable to be classified as faculty or administrators—all of which contributes to a high level of stress. Thus chairpersons must learn to cope readily with the demands of being in the middle with responsibilities to both faculty and administration (Seagren et al., 1993).

Within this spectrum of role complexities and ambiguities, researchers need to further investigate the nature of department chair stress and the significant variables which are associated with such stress. Significant variables that can positively impact stress levels have been identified in previous research as spirituality and life quality (Lawler & Younger, 2002; Mackinnon, n.d.).

**Methodology**

A survey research method was used to investigate the relational effects of quality of life and spiritual well-being on job stress among academic chairpersons in selected Seventh-day Adventist institutions of higher learning.

The following instruments were used in this study:

1. Occupational Stress Inventory Revised (OSI-R) measures four strains (physical, psychological, vocational, and interpersonal) consisting of 40 items (see Appendix B), where a growing research base shows the relationships between the OSI-R scales and work-related conditions, activities, and behaviors. The following studies: (a) Van Wagoner (1985), absenteeism; (b) Higgins (1985), physical symptoms; (c) Gallagher (1983), job satisfaction; and (d) Baldwin (1981); Kleingberg (1983); Missbach (1984), burnout have examined the role of occupational stress on nonproductive behavior. These
previous studies have successfully utilized the OSI-R and have demonstrated its value in research data gathering.

2. Spiritual Well-Being (SWB) consists of 20 items responded to on a 7-point scale ranging from strongly agree to strongly disagree. Responses for each of the items are assigned a numerical value of 1-7. Ten items measure Religious Well-Being (RWB), and 10 items measure Existential Well-Being (EWB) (see Appendix A). Femander et al. (2004), Lee and Ingram (2004), and Davis et al. (2003) used this instrument as intended as a rating scale that requires the subject to select, on a continuum, the answer that best describes their response to each question.

3. Quality of Life Inventory (QOLI) consists of 17 items (see Appendix B) where each is rated by respondents in terms of its importance to their overall happiness and satisfaction (0 = not at all important, 1 = important, 2 = extremely important), and in terms of their satisfaction with the area (-3 = very dissatisfied to 3 = very satisfied). Many therapists administer the QOLI on a weekly basis to monitor client progress and have found it well suited for planning and evaluating psychological treatments (Frisch, 1994).

Approval letters were sent out to respective deans for each of the targeted universities (see Appendix A). Upon receipt of the approval notice for the study to be done, packets containing an introduction letter including confidentiality issues, demographic data form, SWB instrument, OSI-R instrument, QOLI instrument, and return envelope were mailed to the respective chairpersons at each individual university participating in the study (see Appendix B). Upon receiving completed questionnaires, they were scored and recorded and placed into a database using BMDP6M software.
Descriptive statistics were used to describe the results and inferential statistics in terms of (a) correlational analysis for the hypotheses 1 and 2, (b) multiple linear regression for hypotheses 3-14, and (c) canonical correlation analysis for hypotheses 15-17. All hypotheses were tested at the 0.01 level.

**Population**

The sample population consisted of 137 chairpersons in tertiary institutions of the North American Division of Seventh-day Adventists. The entire population of chairpersons was used for this study due to population size and accessibility to the researcher.

**Findings/Discussions**

**Strain Variables and Their Relationship to Spiritual Well-Being**

A number of studies (Albert, 2001; Fabricatore, 2000; Holt & Dellmann-Jenkins, 1992) have indicated that there are significant relationships between spiritual well-being and the strain variables; however, the results of this study seem to suggest that religiosity is more accurately related to high levels of stress rather than in lower levels as originally hypothesized (see Table 3). There may be two explanations as to why non-stress-reducing outcomes on religiosity occurred.

One possibility might be that although higher stress scores correlated with higher religiosity scores, they may not necessarily equate to a cause and effect relationship, and higher religiosity may not actually cause higher stress in the respondents. The higher
religiosity scores may reflect more of an insulating effect in which the higher religiosity allows for a better stress-coping environment. If true, this would allow a respondent to tolerate higher levels of stress without the negative impact normally associated with stressful situations. This is supported by Williams (1991), who concluded that religiosity may act as a buffer against the effects of stress. In fact, higher levels of religiosity may protect respondents from the normal negative effects of stress so that they are able to tolerate increased levels while showing similar responses to those experiencing lower levels of stress who do not have the religiosity component. This argument is supported by Johnson and Larson’s study in which they concluded that in addition to fostering feelings of satisfaction and well-being, there was evidence that the religiously well-connected experienced less stress and coped more effectively with the stress they do experience (Johnson & Larson, 1998). Oakes (2000) supports this argument in his review of previous research, which suggests that religious coping is a healthy defense against stress, depression, crisis, and other trauma. It does not state that it will reduce stress, only that it is an effective coping mechanism against stress.

Religiosity might be helping respondents to cope more efficiently with stress, thereby allowing higher levels of stress to be experienced without the expected negative impact. This appears to be borne out by the fact that the respondents in this study are in positions of high demand and accountability and yet are able to cope reasonably well with the related stress from their positions. Further support comes from the fact that many of the respondents report being in their current positions for many years (see Table 2) and not suffering from burnout or other stress related maladies. Further, the religiosity, as
borne out in numerous studies (Cox & Hammons, 1988; Davis et al., 2003; Holt & Dellmann-Jenkins, 1992), is related to sense of purpose and meaning in one's life, which are all positive factors in reducing stress levels. Therefore, high stress levels would not be "caused" by religiosity levels but would be mitigated by them so that higher levels of stress could be adequately tolerated by one's own defense mechanisms (Johnson & Larson, 1998; Oakes, 2000). Another possible explanation may be that religiosity might actually be seen legalistically by the respondents. Instead of providing a sense of purpose, meaning, and direction, it could be viewed as just another set of "rules" to be followed amongst all the other rules that they adhere to.

Lewin and Markides (1985) speculated from their study that guilt derived from trying to follow strict religious practices may lead to hypertension. In this scenario, higher religiosity scores would directly create higher stress scores. If being more religious (higher religiosity) is interpreted as having to follow more rules, a higher level of stress could be expected to occur because of the need to do or not do prescribed behaviors that represent or were consistent with being more religious. By defining one's level of religiosity through the number of good versus bad behaviors in given situations, a respondent might actually create an environment where religiosity became a source of stress rather than a barrier to it (Lewin & Markides, 1985; Masters & Bergin, 1992). In this case, not only would the respondents be responsible to the general rules of society as well as the rules from their workplace, but also the rules associated with their level of religiousness.
For the specific variable of vocational strain, the following impacts were observed. The impact religiosity has in how stress at work is experienced appears to be quite important (see Tables 3 & 19), with the best predictor being vocational strain with a $\beta$ value of 0.43. High religiosity scores by respondents correlated with high responses for vocational or "workplace" stress. Conversely, if respondents reported low religiosity levels they also reported low vocational strain levels. The positive correlation is inconsistent with previous studies where religiosity is an important factor in reducing "workplace" stress in that higher levels would reduce stress; however, the data indicate that higher levels correlate more with vocational strain (see Table 3). The results do not agree with previous studies by Johnshon and Larson (1998), which concluded that more religiously committed people cope more effectively with stress than do people who are less religiously committed. Further, Ellison (1982) states that spirituality does not exist in isolation from our psyche and soma because it affects and is affected by our physical state, feelings, thoughts, and relationships. Therefore, religiosity may not be the principal factor, but rather an important ingredient in how we experience and deal with stress.

As discussed above, religiosity cannot be clearly stated as having a cause-effect relationship on vocational strain, indeed it may actually be creating a buffer effect for the respondents. However, the positive relationship between the two should not be quickly or easily dismissed. In this regard, the results may not be inconsistent with the previous study cited by Johnson and Larson (1998), due to the fact that their study did not necessarily find that religiosity reduced stress levels, but that coping mechanisms increased due to religiosity. This is borne out by the fact that a majority of the respondents have retained,
for many years, positions that involve high levels of stress, yet have not suffered the accompanying burnout consistent with high levels of stress.

The data also indicate that existential well-being also plays a significant role in the levels of vocation strain experienced by the respondents (see Table 4). It impacts respondents in a similar way as did the religiosity variable did: as existential well-being scores increased, so also did vocational strain scores. While the cause-effect relationship cannot be confirmed, it cannot be ruled out. Although existential well-being is dissimilar to religiosity in that a person’s subjective concept of self is central to the measure of well-being, it is similar in that meaning is applied to one’s life. Both existential well-being and religiosity contribute a sense of meaning, purpose, or satisfaction to one’s subjective evaluation of life.

It would normally be expected that higher existential well-being would result in lower vocational strain; however, as with religiosity this is not the case in this study (see Table 4). Arriving at or maintaining high levels of existential well-being might be stressful in and of itself, living up to one’s personal subjective evaluation of purpose and meaning requires goal setting and attainment as well as the rules that accompany that process. A higher stress level would not necessarily be an incorrect assumption of this interaction. Existential theorists Rollo May and Victor Frankl have suggested that since meaning is central to existential well-being, how one gets or maintains meaning may actually be stressful (Corey, 2001).

The results for psychological strain mirrored that for vocational strain when existential well-being is considered. Higher levels of existential well-being correlated with
higher levels of psychological strain as reported by respondents (see Table 4). It is interesting to note that religiosity is not a factor for this strain variable as it was with vocational strain (see Table 3). This lends further evidence to the argument that religiosity acts as a buffer towards stresses (Williams et al., 1991) and is consistent with accepted psychological theory that suggests that existential well-being levels would positively correlate with psychological strain levels.

The positive relationship between existential well-being and interpersonal strain appears to be closely related to the interaction of self-esteem and interpersonal strain (see Table 4). Accepted psychological theory requires that the whole person be evaluated and treated for greatest success. Existential well-being in essence measures the whole concept of a person in that it considers a person’s thoughts about situations at home, work, and school as well as other areas. If persons perceive that they are getting meaning or positive outcomes from these areas they are likely to have high existential well-being levels, and this naturally correlates well with interpersonal strain levels as discussed by Corey (2001).

The positive relationship between existential well-being and physical strain was not completely expected (see Table 4); however, it is clear that the meaning(s) one places on their life has a correlated physical reaction. Persons who place high meaning on their existence do experience physical side-effects from ulcers, anxiety attacks, insomnia, high blood pressure, and stroke. Type A personalities are often prime examples of this relationship.

The data also suggest that when value is placed on being or feeling healthy, and the individual is not actually feeling healthy or is suffering from an illness, strain of a physical
nature is increased. The inconsistency from the value or desired state to the actual experienced state appears to result in physical reaction of a negative nature (Nakajima, 1994). This is not incompatible with Freud's concepts of defense mechanisms, such as repression. It also agrees with Rollo May in that meaning or lack of meaning creates anxiety in individuals, which can manifest itself in physical symptomology (Corey, 2001).

It can be concluded that vocational strain is the best predictor of both existential well-being ($\beta = 0.48$) and religiosity ($\beta = 0.45$).

**Strain Variables and Their Relationship to Quality of Life**

The impact that strain/stress has upon people has been discussed in literature for many years and has highlighted the impact on quality of life in many ways, including the occupational or work life. Diener and Biswas-Diener (2000) concluded that achieving one's goals and living within their accepted values is inextricably linked with life satisfaction. They concluded that people making progress towards goals, in agreement with their values, are likely to be happy. They also cited Emmons (1986) who found that people will have a more positive affect if they succeed at particular goals, than if their goals are in conflict. Quick et al. (1997) list the direct cost of strain/stress in occupational settings as "dysfunctional turnover," "absenteeism," "poor morale," and "low job satisfaction." They also listed four specific areas in which organizational strain/stress may occur: "Physical," "role," "tasks," and "interpersonal situations."

In the "quality of life" area of "satisfaction" two variables, namely self-esteem and creativity, showed a significant impact upon vocational stress levels in the respondents.
where they were negatively correlated (see Table 5). This means that as self-esteem and creativity levels increase, the vocational strain level decreases within the respondents. These findings are in agreement with Quick et al. (1997), who suggested that there are four “demand” areas that impact stress levels, namely, physical, role, task, and interpersonal. They argue that role impacts work stress in that a “role conflict” can emerge where individual expectations conflict with organizational expectations. They also identify “Role Ambiguity”, where unclear communication about ones’ role is given by a direct supervisor. In each of these settings a resulting frustration from not being able to utilize creative talents can occur. Quick et al. (1997) also argue that tasks can impact vocational stress when they are either too difficult or too simple.

Self-esteem—how one “feels” about oneself—and creativity, feeling useful, and having the ability to impact the environment appear to be linked. Feeling good about one’s self has always been seen as a mitigating stress factor. Indeed, most of modern psychology is predicated on this concept. This idea is reflected with feeling creative and having the ability to improve or change things. Having the ability to impact the environment appears to allow people to feel useful and less “trapped” in everyday tasks. Life itself requires a great deal of creativity to be successful. Therefore, being involved with situations that foster self-esteem or creativity would clearly create an environment that would lead to reduced vocational strain, which may also foster still higher levels of self-esteem and creativity. Further, the data suggest that self-esteem ($\beta = 0.46$) is the best predictor of vocational strain and significant at the 0.05 level. This is in agreement with Quick et al. (1997) who indicated that low self-esteem was associated with increased vocational stress.
Diener and Biswas-Diener (2000) emphasized that if people make progress towards their goals, they are more likely to be happy. Blix and Lee (1991) in their study found that having a bad “fit” between motivational style and the rewards obtained from work experienced higher vocational stress symptoms. They also concluded that persons in these situations felt less able to manage work stress and were more likely to consider a career change.

The data also indicated negative correlations between the QOLI satisfaction variables of health, self-esteem, goals/values, money, and creativity with psychological strain (see Table 7). These relationships were also consistent with expectations, where a person experiencing low levels of health satisfaction under normal situations would likely experience psychological strain since health is an important component in self-conceptualization and value. Fears concerning illness, death, or the financial burdens associated with health problems do cause worry, which is recognized as a psychological strain and is consistent with studies done by Nakajima (1994).

Low self-esteem satisfaction, or a low opinion of self, is also recognized as having psychological implications. Not feeling good about one’s self is recognized as a psychological warning sign indicating a likelihood of high stress being experienced by an individual. It was expected that low self-esteem satisfaction would correlate with high psychological strain levels in the respondents. In my own counseling practice, this correlation has been observed many times in clients and appears consistent with the data.

The data also suggested that low goals/value satisfaction as well as low self-esteem satisfaction levels are predictors of psychological strain, with self-esteem satisfaction being
the best predictor (see Table 7). Setting goals or having things that lend value to life is important in creating psychological health (Noble, 1996). Being able to plan and work towards a desired outcome allows us to gain meaning in life (Diener & Biswas-Diener, 2000). This is also consistent with Erikson's stage of Industry vs. Inferiority in which he suggested that striving for and obtaining a desired outcome is essential for good mental health and normal development (Corey, 2001). Conversely, not being able to reach a goal or have value in life results in a feeling of inferiority in the individual that may ultimately result in withdrawing from society, leading to isolation, which is in agreement with Adlerian theory.

Since money often plays a central role in our ability to set and meet goal requirements, it too appears to play a role in the levels of psychological strain being experienced. Not being satisfied with income level or the amount of money available is also recognized as impacting psychological strain levels. Koening (1999) suggested that poorer people experience higher levels of stress. Indeed, money issues are high on issues listed by couples as a reason for seeking a divorce. Frustration arising from the inability to purchase needed items or create a better life for one's family usually impacts a person's feeling about self-worth. Lack of money also hinders people from obtaining proper nutrition and health services. A low socioeconomic status is cited repeatedly as a negative or risk factor for physical and mental health development in children. Money, in a sense, can purchase barriers that help defend against the harmful effects of stress.

For men, especially, the ability to provide financially is seen as contributing to a positive view of self and a sense of satisfaction and accomplishment. Often men know of
no other way in which to feel needed by their loved ones outside of the belief that they are living up to their responsibilities in that their families are adequately provided for financially. When “laid off” from work a higher level of stress is often experienced, and the affects are seen more in men than in women. Since a majority of respondents in this study are men the results seem consistent with this view (see Table 2).

The data also indicated that low self-esteem and goals/values satisfaction variables are predictors of psychological strain, with self-esteem being the best predictor (see Table 8). These two variables appear to impact each other in a psychological way in that poor goal attainment tends to negatively impact self-esteem levels. The converse is also expected in that having low self-esteem also negatively impacts the goals and values that one seeks to attain. People with poor self-esteem do not tend to set big goals or take risks because they do not believe in themselves (Noble, 1996). The resulting consequences is manifested in psychological dysfunction or high psychological strain.

In this study, I expected to find a close relationship between interpersonal strain and self-esteem, and the data supported such a relationship (see Table 10). It has been firmly established in practice and literature over the past 50 years that how one views or feels about oneself has a measurable impact upon one’s interpersonal comfort levels. Accepted psychological practice clearly lays out the argument that one has to like oneself before one can genuinely like other people. Current theory such as Rational Emotive Behavior Therapy focuses in on negative and irrational thoughts about self as a reason for poor interpersonal interaction (Corey, 2001). By reducing the number of negative thoughts and feelings about self, a person is better able to accept a more accurate concept.
of self, which generally leads to a higher confidence level (Albert, 2001). Higher confidence in self and the belief in oneself to better handle given situations tend to allow a person to break free of fear of rejection by others and therefore results in more interpersonal risk-taking, which allows for greater personal rewards. A cyclical effect typically ensues, resulting in an ever more comfortable interpersonal strain level experience by the subject.

As with the other strain areas, interpersonal strain levels are affected by self-esteem levels. The data suggest that high levels of self-esteem resulted in low levels of interpersonal strain and low levels resulted in high interpersonal strain levels, where self-esteem ($\beta = 0.36$) was the best predictor of interpersonal strain. It has been long established that how we think about ourselves directly impacts how we act around others, thereby impacting the interpersonal interaction. The self-fulfilling prophecy concept applies here. Others treat us in a manner similar to how we think about ourselves, and in the severest form we force others to treat us in way similar to our own self-concept due to the way we act around them. A healthy sense of self-esteem must be present in interpersonal relationships because a sense of self must be established before any level of intimacy can be achieved. This sense of intimacy is at the heart of human relationships. By having the ability to establish a healthy sense of identity restricted, our self-esteem is impacted and our ability to achieve intimacy is disrupted. This, according to Erikson's psychosocial stages, usually results in isolation which is a form of interpersonal strain.

Further, having low self-esteem also minimizes the chances that we will take risks in social settings or we may avoid them altogether. Those people who are shy or unsure of
themselves often experience anxiety when around others, and they seek to avoid any situation which could lead to social interaction, and when forced into social settings experience extreme discomfort.

The results indicated that low health and self-esteem satisfaction levels resulted in high physical strain (see Tables 12 and 15), and this is in agreement with the concept that health and self-esteem impact each other and impact physical reactions as well. It is well established that low self-esteem impacts health and overall physical stress. Health satisfaction or the perceived healthiness of an individual also contributes to the level of physical stress (Van de Klink, 2001). Perhaps the most important factor is whether a person feels as good as they would like. Do they feel good, or are they suffering from severe health problems? Research suggests that even beginning to think that one's health is deteriorating has a substantial impact on the level of physical stress that is experienced (Van de Klink, 2001). Dealing with a severe illness or high level of pain put a great deal of physical strain on an individual. When experienced together, indicating that they are related in some fashion, the strain level increases to a higher level than if experienced separately (see Tables 15 & 16). The opposite results occurred when self-esteem and health satisfaction levels were high—a situation which indicates that things are going well or at least perceived positively by the individual. The strain levels were reduced under these conditions, thereby indicating a direct correlation between these variables (see Table 16). The following QOLI satisfaction variables as a set showed significant relationship with the OSI-R strains: (a) self-esteem, (b) health, (c) money, and (d) creativity; with self-esteem satisfaction being the best predictor. When considering the OSI-R strains, all were
found to be important in relation to the QOLI satisfaction variables as a set, with psychological strain having the greatest impact (see Table 16). These findings add to the body of literature in view of the fact that no previous studies have shown such relationships, as a set, between QOLI satisfaction variables and OSI-R strain variables.

**Strain Variables and Their Relationship to Stress Catalyst**

Findings of this study indicated that all the OSI-R strains were important, and there were a number of stress catalysts, namely religiosity, existential well-being, self-esteem, and health satisfaction, that were important as well (see Table 25). These findings were substantiated by Seldin (1987) and Spector (1997), who documented relationships between strain and stress catalysts and the impact stress catalyst variables have on strain variables. They indicated that stress catalysts do impact strain levels and, by reducing stress catalyst variables levels, strain levels can be reduced as well.

Having higher levels of existential well-being suggests that a person is satisfied or comfortable with how they fit into life and are not significantly psychologically strained. Naturally, many different areas are involved in a person’s life, and how they view the meanings they apply to it affects psychological strain levels. Being successful in life requires the ability to be flexible and to adjust quickly to new situations. A person must be able to read the situation correctly to be able to select the appropriate correct response. Being unable to do this can allow a person to select inappropriate responses that have negative social and professional consequences. Further, a person must be able to identify correctly the facial and body cues manifested in interpersonal communication that are so
vital to successful social interactions (Vander Zanden, 2003). Not being able to identify accurately friend or foe, or funny versus serious communication, can leave a person isolated and socially ineffective. This can have a direct negative psychological impact on how people perceive themselves. Therefore, a lot of effort is put into properly identifying social messages in specific situations which enhances the chances of getting along with others. In the vocational setting, a person cannot generally yell at their boss even though they might be very angry with them because it could cost them their job. A higher level of psychological and vocational strain is then created because one must still deal civilly with their boss even though they might be seething at them internally. The job itself provides a sense of meaning that is required to feel good about oneself, but the boss is creating a vocational strain about the work. Therefore, directly confronting the problem could lead to a larger problem that could directly affect self-concept–losing the job! The conundrum itself has the potential to increase the psychological and vocational strain levels significantly. Maintaining correct decorum in professional and social situations is a must and takes considerable psychological effort, but it is done, in part, because we want to be in situations that allow us to feel good about ourselves and our roles in the world.

The findings of this study indicated that vocational strain correlated with religiosity, existential well-being, health importance, creativity importance, money satisfaction, and creativity satisfaction (see Table 17). Being healthy would normally be expected to reduce strain levels; however, being healthy also takes away a potential excuse for poor performance. Being happy with one’s health means that one is feeling good and suggests that positive outcomes should result. Further, if one feels good, then a belief that
more work tasks should be accomplished can prevail which can create a strain on the individual (Corey, 2001). Being healthy allows for an environment in which one can become productive but does not automatically mean that one will be productive. There are plenty of healthy, yet lazy, people who reinforce this point.

When low self-esteem and low goals/values satisfaction were linearly combined, subjects were more likely to experience higher levels of interpersonal strain than if they were experienced independently from each other (see Tables 21 & 25). Since health satisfaction plays a role in our social interactions, higher interpersonal strain levels were expected. The interaction is highlighted by Alder in his compensation approach to psychological development and by Erikson in his psychosocial stages of development (Corey, 2001). Erikson suggested that certain “goals” must be attained at each of his eight stages for a healthy individual to develop and function well interpersonally. In fact his stage; “Autonomy vs. Shame and Doubt,” clearly suggests that if we cannot meet a goal of independence, whether due to poor physical health or other factors, we are likely to experience personal shame and doubt about our abilities. By not accomplishing this step we are then more likely to experience “guilt” in the third stage; “inferiority” in the fourth stage; “confusion” in the fifth stage; and “isolation” in the sixth stage – all of which correspond with interpersonal strain. Doubting one’s abilities, due to physical/health limitations, to be able to interact with others, having guilt or feeling stupid, being confused about one’s roles in life, and ultimately being isolated and alone due to the fact that interpersonal interaction has been impaired all play a role in the level of comfort or strain a person has in dealing with others. Without practice and confidence, the levels of strain

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tend to increase.

Interpersonal strain is also correlated with existential well-being, religiosity, self-esteem, money, creativity, and helping satisfactions when experienced in a linear combination (see Table 21). As previously outlined, maintaining a high existential well-being level can place considerable strain on an individual, but couple that with low religiosity levels and the strain level increases, with existential well-being being the best predictor (see Table 22) because not only is the meaning of life affected, but how a person feels about themself separate from their place in the world is also affected. It is bad enough to not feel useful or to have a bad work or personal situation, but also hating or not appreciating oneself adds to the level of interpersonal strain since it is even more difficult to deal with others when one does not like oneself as a person.

If money troubles and creativity problems along with helping issues are then introduced to the equation, a higher interpersonal strain situation is likely created. Because money can buy influence, it provides a measure of security and is a way of comparing one’s worth, and it plays an important role is either increasing or decreasing strain levels. People categorize other people based on their income, and they also tend to provide or reduce personal opportunity based on money judgments. People with money are treated better by others than those who are poor. Money also allows one to move up or down in “class” standing. Perception is also influenced by the presence of money. But if one does not have money, the advantages cannot be obtained and in essence one becomes disadvantaged.

Oftentimes a money-disadvantaged person can gain favor or status with others
because of the creative abilities such as sharp wit, artistic vision, or musical ability (e.g., "American Idol"), but if individuals lack those creative abilities or feel that their creative side is being restrained in some way, they can feel embarrassed or frustrated and have a more difficult time in maintaining interpersonal relationships. Creativity is an important factor in interpersonal relationships and more creativity appears to aid in success in this area.

Another factor, when experienced in low levels, that affects interpersonal strain is helping satisfaction (see Table 22). People who do not feel as though they are helping others or helping to make the world better can feel useless. Perhaps they can wonder if they have any value to the world or not. This type of thinking can lead to reduced involvement with others (isolation) or lead to dysthyemia or other depressive states which significantly impair interpersonal relationship levels.

Experiencing all these factors together clearly supports the contention that a subject would be more likely to experience high levels of interpersonal strain. Since each of these factors individually clearly impacts interpersonal situations, experiencing them congruently or linearly should increase the likelihood of them creating even higher levels of interpersonal strain within an individual (see Table 25).

The following stress catalyst variables as a set showed significant relationship with the OSI-R strains: (a) existential well-being, (b) self-esteem satisfaction, (c) health satisfaction, (d) religiosity, with existential well-being as having the most importance (see Table 25). When considering the OSI-R strains, all were found to be important in relation to the stress catalyst variables as a set, with vocational strain having the greatest impact.
(see Table 25). These findings add to the body of literature in view of the fact that no previous studies have shown such relationships, as a set, between QOLI satisfaction variables and OSI-R strain variables.

**Conclusion**

Chairpersons who experienced increased levels of spiritual well-being had an increase in their vocational stress level, and this was especially true for the existential well-being. It can be concluded that the quality of life has a direct relationship on stress levels in the participants, seeing that higher levels of quality of life correlated with lower levels of stress.

Chairpersons who experienced low levels of self-esteem, health, money, and creativity satisfaction also tended to experience higher levels of psychological, physical, interpersonal, and vocational strain than if either of the variables had been experienced separately, with self-esteem having the greatest impact on satisfaction variables of the QOLI in relationship to OSI-R strains. However, psychological strain had the greatest impact upon chairpersons in relationship to QOLI satisfaction variables.

Chairpersons who experienced high levels of existential well-being and money satisfaction along with low levels of self-esteem and creativity satisfaction also experienced high vocational, psychological, interpersonal, and physical strain levels. Existential well-being had the greatest impact of all the stress catalysts in relationship to OSI-R strains, whereas vocational and psychological strains had the greatest impact on stress catalysts experienced by chairpersons.
Recommendations for Practice

Based on the outcomes of this study, a number of things can be done to improve the strain levels experienced by chairpersons. Implementing programs designed to incorporate the suggestions will be helpful in improving quality of life while decreasing stress felt by academic chairpersons.

Eliminating unnecessary stress situations would be quite helpful. By looking for ways to streamline paperwork, assessments, and evaluations, frustrations could be reduced and more time could be available for chairpersons to spend with their families. Improving communication and holding workshops that teach more effective ways of interaction could improve interpersonal strain levels as well as helping chairpersons explore new and more creative techniques that would reduce vocational strain. Encouraging educators to take personal time for hobbies and activities could help to reduce vocational strain as well as psychological strain levels. Providing incentives for exercise and fitness (i.e., health club memberships) would be valuable for reducing physical stress levels and would improve the quality of life of chairpersons through better health outcomes. An institution must clearly express its mission, vision, and performance goals for the organization. In addition, allowing free expression of ideas while involving educators in decisions that are relevant to them would provide a more meaningful work setting, which is instrumental in reducing vocational strain. It is important for the institution to encourage the formation of support systems that can help address the appropriate uses of worry as well as helping to lower unrealistic expectations would reduce psychological, vocational, interpersonal, and
physical effects of stress.

The organization can also help educators reduce stress by identifying their specific professional and hobby interests and facilitating opportunities in which educators with like interests can get to know each other outside of their strictly professional roles. Further, genuinely seeking to understand and assist educators in personal and professional goal attainment would be useful in reducing stress levels.

Finally, teaming experienced faculty with less experienced faculty on recruiting trips, program development, organizational committees, and curriculum management projects would be beneficial. Experienced faculty would be able to share their vast knowledge while feeling useful and needed. They could also benefit from the influx of "new blood" and ideas from the more recent members to their profession. New ideas learned from the academic environment could be shared with the more experienced faculty and provide them with more options with which to reduce their stress areas.

**Recommendations for Research**

The following recommendations are made for further research:

1. This study should be replicated with gender differences explored on each of the Strain variables.

2. It is recommended that further studies focus on the cause/effect relationship between the SWB variable and the PSQ variables.

3. It is recommended that further studies also look into cause/effect relationships between QOLI variables and PSQ variables.

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4. Further study should look into the relationship between SWB variables and QOLI variables.

5. An investigation into the relationship between SWB variables and EWB variables should be done. Does one affect the other?

6. Further study should be made into whether number of years as a chairperson affects the ability to handle the types of strain included in this study.
February 4, 2005

Dr. Pat Mutch
Vice President for Academic Administration
Andrews University
Berrien Springs, MI 49104

Dear Dr. Mutch:

I am currently completing my dissertation requirements here at Andrews and I am writing to formally request your permission to use Andrews University Chairpersons in my dissertation study. My topic is "Religiosity and Quality of Life as Correlates of Job Stress Among SDA Academic Chairpersons of Degree-granting Institutions". I am excited about this study in that it allows us to study an important SDA population that has had little research done on it in the past. Chairpersons are among the most highly stressed faculty in our universities and understanding how religiosity/quality of life impacts their stress levels and their ability to cope with it is important. We hope that after analyzing the data we will be able to develop strategies that will enable this important group to more fully enrich their lives and help them avoid burnout.

I am pleased to tell you that this study will be completely anonymous. We will not be collecting demographic data from the participants. This will ensure that we will not know how respondents have replied to the surveys they are given. We will only be gathering data from three standardized and widely accepted survey instruments. Each of these instruments has been previously used in research studies and have proven to offer strong validity and reliability that are required in scholarly research. The total time needed to complete the surveys will be between 15 and 40 minutes.

These instruments are as follows:

1. The Quality of Life Inventory (QOLI) by Michael Frisch.
2. The Occupational Stress Inventory–Revised (OSI-R) by Samuel Osipow.
3. The Spiritual Well-being Scale (SWBS) by Craig Ellison and Raymond Paloutzian.

I am also requesting that Loma Linda University, La Sierra University, Southwestern Adventist University, and Southern Adventist University participate in this study. I would love to have MY university represented in this important study. Please take a moment to indicate below if you are granting permission for Andrews University Chairpersons to be included in this study. Please return the signed letter to Dr. Elvin Gabriel in Bell Hall. Thank you for your time in reviewing this request.

Sincerely,

R-Mark Aldridge

I am granting Andrews participation ___________________________ Signature/Date

I am NOT granting Andrews participation ___________________________ Signature/Date

R-Mark Aldridge
Dear Faculty Member:

As an SDA university educator you face daily the joy and struggles that accompany your important work. Both types of experiences create stresses in your life, however very little research has been conducted to understand these stresses experienced by SDA university educators. Even less research has been conducted on how lifestyle/religiosity enhances or impedes your ability to ward off negative affects of stress. Its time to rectify this oversight!

I am thrilled to have received permission from your administrators to invite you to participate in this study! Your participation will be completely confidential! In fact none of the surveys will require you to identify yourself at all. After I receive your completed surveys, I will not be able to match the results up with your name. I am only interested in the data in the instruments. I hope this will make it more likely that you will participate in this study.

Enclosed you will find three separate parts to my survey which will attempt to determine how Spiritual Well-being and Quality of Life affect job stresses you encounter each day as an educator. The surveys are simple and easy to complete and have been selected because of their accuracy, reliability, and brevity. You can complete them in about 20 minutes and should not have to spend more than 40 minutes even if you chose to spend extra time on each question. Having been a graduate assistant I am very aware of the time constraints you face each day. Therefore, this survey has been designed to let you complete it over lunch or during a break. I found it to be relaxing in that I learned more about myself in the short time it took to complete the questions.

As Adventist educators, you not only teach classes, but provide a spiritual component to education. I am very interested to discover whether this spiritual factor gives you an advantage in dealing daily stressors. The results of this important study will be beneficial: to university and church administrators in selecting faculty resources, to the body of spiritual and well-being literature, to most importantly you in understanding how spirituality and quality of life affect your lives as educators.

The results of this study will be published as a doctoral dissertation at Andrews University in time for Summer 2002 graduation requirements, with Dr. Elvin Gabriel as chairperson. In order to meet these specific time requirements it is extremely important that you fill out the survey as quickly as possible. Please send the completed survey back no later than __________. I have provided postage-paid return envelopes for your convenience. Each kit has cost about $10.00 to prepare so I ask for your complete and timely participation.

Thank you in advance for choosing to participate in this important study!

Sincerely,

R-Mark Aldridge, MA, NCC, TLP

126
R-Mark Aldridge, MA, NCC, TLP
Department of Education and Counseling Psychology
Andrews University, Berrien Springs Michigan

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APPENDIX B
QUESTIONAIRES
Make your ratings in Section Two of the Rating Sheet

1. I don’t seem to be able to get much done at work.
2. Lately, I dread going to work.
3. I am bored with my work.
4. I find myself getting behind in my work, lately.
5. I have accidents on the job of late.
6. The quality of my work is good.
7. Recently, I have been absent from work.
8. I find my work interesting and/or exciting.
9. I can concentrate on the things I need to at work.
10. I make errors or mistakes in my work.

11. Lately, I am easily irritated.
12. Lately, I have been depressed.
13. Lately, I have been feeling anxious.
14. I have been happy, lately.
15. So many thoughts run through my head at night that I have trouble falling asleep.
16. Lately, I respond badly in situations that normally wouldn’t bother me.
17. I find myself complaining about little things.
18. Lately, I have been worrying.
19. I have a good sense of humor.
20. Things are going about as they should.

21. I wish I had more time to spend with close friends.
22. I often quarrel with the person closest to me.
23. I often argue with friends.
24. My spouse and I are happy together.
25. Lately, I do things by myself instead of with other people.
26. I quarrel with members of the family.
27. Lately, my relationships with people are good.
28. I find that I need time to myself to work out my problems.
29. Lately, I am worried about how others at work view me.
30. I have been withdrawing from people lately.

31. I have unplanned weight gains.
32. My eating habits are erratic.
33. I find myself drinking a lot lately.
34. Lately, I have been tired.
35. I have been feeling tense.
36. I have trouble falling and staying asleep.
37. I have aches and pains I can not explain.
38. I eat the wrong foods.
39. I feel well.
40. I have lots of energy lately.
Quality of Life Inventory

DIRECTIONS:

This survey asks how satisfied you are with parts of your life such as your work and your health. It also asks how important these things are to your happiness. Special definitions are used for words like “money,” “work,” and “play.” Keep these definitions in mind as you answer the questions. Answer every question, even if it does not seem to apply to you. It is your feelings and opinions that are important, so there are no right or wrong answers. Just give the answers that best describe you.

The survey asks you to describe how important certain parts of your life (such as work and health) are and how satisfied you are with them.

Important means how much this part of your life adds to your overall happiness. You can say how important something is by picking one of three choices: “Not Important” (0), “Important” (1), or “Extremely Important” (2).

Satisfied means how well your needs, goals, and wishes are being met in this area of life. You can say how satisfied you are by picking one of six choices from “Very Dissatisfied” (-3) to “Very Satisfied” (+3).

For each question, blacken the circle that best describes you.

The example shows how you would answer if WORK was “Important” to your overall happiness:

![Example Answer]

You would answer this way if you were “Somewhat Satisfied” with your WORK:

![Satisfied Example]

HEALTH is being physically fit, not sick, and without pain or disability.

1. How important is HEALTH to your happiness?

![HEALTH Importance]

2. How satisfied are you with your HEALTH?

![HEALTH Satisfaction]

SELF-ESTEEM means liking and respecting yourself in light of your strengths and weaknesses, successes and failures, and ability to handle problems.

3. How important is SELF-ESTEEM to your happiness?

![SELF-ESTEEM Importance]

4. How satisfied are you with your SELF-ESTEEM?

![SELF-ESTEEM Satisfaction]

GOALS-AND-VALUES are your beliefs about what matters most in life and how you should live, both now and in the future. This includes your goals in life, what you think is right or wrong, and the purpose or meaning of life as you see it.

5. How important are GOALS-AND-VALUES to your happiness?

![GOALS-AND-VALUES Importance]

6. How satisfied are you with your GOALS-AND-VALUES?

![GOALS-AND-VALUES Satisfaction]

MONEY is made up of three things. It is the money you earn, the things you own (like a car or furniture), and believing that you will have the money and things that you need in the future.

7. How important is MONEY to your happiness?

![MONEY Importance]

8. How satisfied are you with the MONEY you have?

![MONEY Satisfaction]
WORK means your career or how you spend most of your time. You may work at a job, at home taking care of your family, or at school as a student. WORK includes your duties on the job, the money you earn (if any), and the people you work with. (If you are unemployed, retired, or can't work, you can still answer these questions.)

9. How important is WORK to your happiness?

[Scale: Not Important | Important | Extremely Important]

10. How satisfied are you with your WORK? (If you are not working, say how satisfied you are about not working.)

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]

CREATIVITY is using your imagination to come up with new and clever ways to solve everyday problems or to pursue a hobby like painting, photography, or needlework. This can include decorating your home, playing the guitar, or finding a new way to solve a problem at work.

15. How important is CREATIVITY to your happiness?

[Scale: Not Important | Important | Extremely Important]

16. How satisfied are you with your CREATIVITY?

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]

PLAY is what you do in your free time to relax, have fun, or improve yourself. This could include watching movies, visiting friends, or pursuing a hobby like sports or gardening.

11. How important is PLAY to your happiness?

[Scale: Not Important | Important | Extremely Important]

12. How satisfied are you with the PLAY in your life?

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]

HELPING means helping others in need or helping to make your community a better place to live. HELPING can be done on your own or in a group like a church, a neighborhood association, or a political party. HELPING can include doing volunteer work at a school or giving money to a good cause. HELPING means helping people who are not your friends or relatives.

17. How important is HELPING to your happiness?

[Scale: Not Important | Important | Extremely Important]

18. How satisfied are you with the HELPING you do?

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]

LEARNING means gaining new skills or information about things that interest you. LEARNING can come from reading books or taking classes on subjects like history, car repair, or using a computer.

13. How important is LEARNING to your happiness?

[Scale: Not Important | Important | Extremely Important]

14. How satisfied are you with your LEARNING?

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]

LOVE is a very close romantic relationship with another person. LOVE usually includes sexual feelings and feeling loved, cared for, and understood. (If you do not have a LOVE relationship, you can still answer these questions.)

19. How important is LOVE to your happiness?

[Scale: Not Important | Important | Extremely Important]

20. How satisfied are you with the LOVE in your life? (If you are not in a LOVE relationship, say how satisfied you feel about not having a LOVE relationship.)

[Scale: Very Dissatisfied | Somewhat Dissatisfied | A Little Dissatisfied | Somewhat Satisfied | Very Satisfied]
FRIENDS are people (not relatives) you know well and care about who have interests and opinions like yours. FRIENDS have fun together, talk about personal problems, and help each other out. (If you have no FRIENDS, you can still answer these questions.)

21. How Important are FRIENDS to your happiness?

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
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</table>

22. How satisfied are you with your FRIENDS? (If you have no FRIENDS, say how satisfied you are about having no FRIENDS.)

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
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<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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CHILDREN means how you get along with your child (or children). Think of how you get along as you care for, visit, or play with your child. (If you do not have CHILDREN, you can still answer these questions.)

23. How Important are CHILDREN to your happiness? (If you have no CHILDREN, say how important a child is to your happiness.)

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
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</table>

24. How satisfied are you with your relationships with your CHILDREN? (If you have no CHILDREN, say how satisfied you feel about not having children.)

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

RELATIVES means how you get along with your parents, grandparents, brothers, sisters, aunts, uncles, and in-laws. Think about how you get along when you are doing things together like visiting, talking on the telephone, or helping each other out. (If you have no living RELATIVES, blacken the 0 "Not Important" circle for question 25 and do not answer question 26.)

25. How Important are RELATIVES to your happiness?

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
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</thead>
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<td>1</td>
<td>2</td>
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</table>

26. How satisfied are you with your relationships with RELATIVES?

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
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</table>

HOME is where you live. It is your house or apartment and the yard around it. Think about how nice it looks, how big it is, and your rent or house payment.

27. How important is your HOME to your happiness?

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
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</table>

28. How satisfied are you with your HOME?

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
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<tr>
<td>0</td>
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<td>3</td>
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</table>

NEIGHBORHOOD is the area around your home. Think about how nice it looks, the amount of crime in the area, and how well you like the people.

29. How important is your NEIGHBORHOOD to your happiness?

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
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<td>2</td>
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</table>

30. How satisfied are you with your NEIGHBORHOOD?

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
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<tr>
<td>0</td>
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COMMUNITY is the whole city, town, or rural area where you live (it is not just your neighborhood). COMMUNITY includes how nice the area looks, the amount of crime, and how well you like the people. It also includes places to go for fun like parks, concerts, sporting events, and restaurants. You may also consider the cost of things you need to buy, the availability of jobs, the government, schools, taxes, and pollution.

31. How important is your COMMUNITY to your happiness?

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Important</th>
<th>Extremely Important</th>
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</thead>
<tbody>
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<td>1</td>
<td>2</td>
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</table>

32. How satisfied are you with your COMMUNITY?

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>A Little Satisfied</th>
<th>A Little Somewhat Satisfied</th>
<th>Very Satisfied</th>
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SPIRITUAL WELL-BEING

Appendix A

Spiritual Well-Being Scale

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree
MA = Moderately Agree
A = Agree
D = Disagree
MD = Moderately Disagree
SD = Strongly Disagree

1. I don't find much satisfaction in private prayer with God. . . .
   SA MA A D MD SD
2. I don't know who I am, where I came from, or where I'm going.
   SA MA A D MD SD
3. I believe that God loves me and cares about me.
   SA MA A D MD SD
4. I feel that life is a positive experience.
   SA MA A D MD SD
5. I believe that God is impersonal and not interested in my daily situations.
   SA MA A D MD SD
6. I feel unsettled about my future.
   SA MA A D MD SD
7. I have a personally meaningful relationship with God.
   SA MA A D MD SD
8. I feel very fulfilled and satisfied with life.
   SA MA A D MD SD
9. I don't get much personal strength and support from my God.
   SA MA A D MD SD
10. I feel a sense of well-being about the direction my life is headed in.
    SA MA A D MD SD
11. I believe that God is concerned about my problems.
    SA MA A D MD SD
12. I don't enjoy much about life.
    SA MA A D MD SD
13. I don't have a personally satisfying relationship with God.
    SA MA A D MD SD
    SA MA A D MD SD
15. My relationship with God helps me not to feel lonely.
    SA MA A D MD SD
16. I feel that life is full of conflict and unhappiness.
    SA MA A D MD SD
17. I feel most fulfilled when I'm in close communion with God.
    SA MA A D MD SD
18. Life doesn't have much meaning.
    SA MA A D MD SD
19. My relation with God contributes to my sense of well-being.
    SA MA A D MD SD
20. I believe there is some real purpose for my life.
    SA MA A D MD SD

Note: Items are scored from 1 to 6, with a higher number representing more well-being. Reverse scoring for negatively worded items. Odd-numbered items assess religious well-being; even numbered items assess existential well-being.

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Member, National Board of Certified Counselors

Member, Phi Kappa Phi, Psy Chi, Phi Lambda Theta, Phi Delta Kappa

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Licensed Professional Counselor, State of Pennsylvania # PC002295

National Certified Counselor #39707

Clinical Pastoral Training Certificate