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THE EFFECT OF RELIGIOSITY AND SPIRITUALITY ON
TRANSFORMATIONAL LEADERSHIP CHARACTERISTICS
OF HOSPITAL FOOD AND NUTRITION MANAGERS

by

Anna N. Sarver

A thesis submitted to the faculty of

Brigham Young University

In partial fulfillment of the requirement for the degree of

Masters of Science

Department of Nutrition, Dietetics and Food Science

Brigham Young University

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BRIGHAM YOUNG UNIVERSITY

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This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

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BRIGHAM YOUNG UNIVERSITY

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ABSTRACT

THE EFFECT OF RELIGIOSITY AND SPIRITUALITY ON TRANSFORMATIONAL LEADERSHIP CHARACTERISTICS OF HOSPITAL FOOD AND NUTRITION MANAGERS

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Masters of Nutritional Science

Effective leadership in the field of dietetics is becoming increasingly vital in a rapidly changing world. A determination of factors which impact leaders and their followers is essential. This study was designed to examine the relationship between religiosity and spirituality and transformational leadership characteristics of hospital food and nutrition managers as rated by self as well as by those directly supervised by the managers. The influence of religious and spiritual beliefs on the workplace and workplace practices was also examined.

Respondents were selected from the American Hospital Association database. Hospitals from 250 to 499 beds were included. Directors of Foodservice and Nutrition Services as well as Clinical Nutrition Managers were asked to participate, along with

those they directly supervise. Of managers who initially agreed to participate, 129 (72%) were included in the final analysis, along with 530 of their subordinates.

Variables examined included the influence of religiosity/spirituality on the workplace and workplace actions of respondents, issues relating to trust, self- and employee-rated transformational characteristics of managers, demographics, job related factors, and religiosity and spirituality of managers and employees. Frequency data was collected for virtually all questions on the survey instrument. General Linear Model (GLM), Pearson's Correlation, and the Means Procedure were all used as appropriate to examine the relationships between the variables of interest.

The religiosity and spirituality of managers and their employees were not related to perceived transformational leadership characteristics of managers. Both managers and employees with higher levels of religiosity and spirituality were more influenced by (and demonstrated through their actions) religious and spiritual beliefs in the workplace.

Transformational leadership was related to other variables examined, such as the type of manager, job enjoyment of managers and employees, as well as issues relating to trust between managers and employees.

There were also significant differences seen between manager perceptions of their transformational leadership characteristics and employee perceptions of their managers. Managers rated themselves consistently higher on all individual Transformational Leadership Scales, as well as the summed Transformational Leadership Score, than did their employees. These differences were all highly significant based on the Means Procedure.

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TABLE OF CONTENTS

Title.....	i
Graduate Committee Approval.....	ii
Final Reading Approval and Acceptance	iii
Abstract.....	iv
Acknowledgments.....	vi
Table of Contents.....	vii
Introduction.....	1
Leadership in Dietetics	1
Transformational Leadership.....	1
Religiosity/Spirituality.....	2
Objective.....	2
Hypotheses.....	2
Limitations	3
Definitions and Abbreviations	4
Literature Review.....	7
Leadership.....	7
Challenges Facing Leaders	7
Motivation.....	8
Transformational Leadership.....	10
Characteristics of Transformational Leaders.....	10
Research Findings on Transformational Leadership	12

Leadership in Dietetics	12
Research on Leadership in Dietetics.....	13
Transformational Leadership in Dietetics.....	14
Religiosity and Spirituality Trends in America	15
Religiosity and Spirituality in the Workplace.....	17
Religiosity in Dietetics.....	19
Methods.....	21
Sampling and Sample Size.....	21
Instrumentation	21
Procedures.....	24
Approval	24
Pilot Study.....	25
Distribution of Survey Questionnaires.....	26
Follow-up.....	27
Data Analysis	28
Results.....	31
Demographics of Sample.....	31
Job Related Questions.....	35
Religiosity and Spirituality	36
Transformational Leadership Scores	37
Transformational Leadership Scores and Demographics	41
Transformational Leadership Scores and Job Related Questions.....	43
Transformational Leadership Scores and Religiosity/Spirituality Scores	47

Transformational Leadership Scores (TFS), Spiritual Influence (SIS) and Actions (SAS), and Trust (MTS and ETS).....	47
Religiosity/Spirituality Scores	51
Religiosity/Spirituality Scores and Demographics	52
Religiosity/Spirituality Scores and Job Related Questions.....	55
Religiosity/Spirituality Scores and Spiritual Influence (SIS) and Actions (SAS)....	55
Religiosity/Spirituality Scores and Trust (MTS and ETS)	56
Spiritual Influence (SIS) and Actions(SAS).....	62
Spiritual Influence (SIS) and Actions (SAS) and Demographics.....	69
Spiritual Influence (SIS) and Actions(SAS) and Job Factors.....	73
Spiritual Influence (SIS) and Actions(SAS) and Trust (MTS and ETS).....	76
Internal Validity	76
Discussion/Conclusions	77
Addressing the Hypotheses.....	77
Other Discussion.....	79
Further Research	81
References.....	83
Appendix A: Manager Questionnaire	87
Appendix B: Employee Questionnaire	92
Appendix C: IRB Approval	97
Appendix D: Pilot Survey Materials.....	99
Appendix E: Initial Request for Participation.....	104
Appendix F: Distribution of Survey Questionnaires	109

Appendix G: Initial Follow-Up.....	112
Appendix H: Follow-Up #2	115
Appendix I: Follow-Up #3.....	121

List of Tables

Table 1. Demographic Characteristics of Respondents	32
Table 2. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership Characteristics	38
Table 3. Summed Transformational Leadership Scores (TFS) and Demographic Characteristics.....	42
Table 4. Summed Transformational Leadership Scores (TFS) by Job Factors	44
Table 5. Manager and Employee-Rated Individual Transformational Leadership Scales and Summed Transformational Leadership Scores (TFS) by Religiosity Scores.....	48
Table 6. Manager and Employee-Rated Individual Transformational Leadership Scales and Summed Transformational Leadership Scores (TFS) by Spirituality Scores	49
Table 7. Pearson's Correlation, Transformational Leadership Score (TFS) by Spiritual Influence Score (SIS), Spiritual Action Score (SAS), Manager Trust Score (MTS), and Employee Trust Score (ETS).....	50
Table 8. Frequency of Religiosity Scores by Spirituality Scores	52
Table 9. Demographics by Manager and Employee Religiosity and Spirituality Scores.....	54
Table 10. Manager and Employee Spiritual Influence Scores (SIS) by Religiosity Scores.....	57

Table 11. Manager and Employee Spiritual Influence Scores (SIS) by Spirituality Scores.....	59
Table 12: Manager and Employee Spiritual Actions Scores (SAS) by Religiosity.....	60
Table 13: Manager and Employee Spiritual Actions Scores (SAS) and Spirituality Scores.....	61
Table 14. Manager-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Manager Religiosity Scores.....	63
Table 15. Manager-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Manager Spirituality Scores.....	64
Table 16. Employee-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Employee Religiosity Scores.....	65
Table 17. Employee-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Employee Spirituality Scores.....	66
Table 18. Employee-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Manager Religiosity Scores.....	67
Table 19. Employee-Rated Manager Trust Score (MTS) and Employee Trust Score (ETS) by Manager Spirituality Scores.....	68
Table 20. Frequency of Manager and Employee Responses to individual questions in Sections A and B.....	70
Table 21. Manager and Employee Demographics by Summed Spiritual Influence (SIS) and Spiritual Actions (SAS) Scores.....	72
Table 22. Manager and Employee Spiritual Influence (SIS) and Spiritual Actions (SAS) Scores by Job Factors.....	74

List of Figures

Figure 1: Structure of survey sections A-D	22
Figure 2: Structure of survey section E.....	23
Figure 3: Questions comprising summed subscores.....	28

INTRODUCTION

Leadership in Dietetics

The topic of leadership in dietetics is one that has been of interest and concern to the dietetics profession for decades. In the 1950's Dr. Anthony Rourke addressed the American Dietetic Association, saying, "When the day comes that your executive ability equals your scientific knowledge, your profession will be secure. Until that day, you will be faced with constant and unwelcome challenge (1)." The world of healthcare and dietetics is changing rapidly, and it is important to constantly monitor the changes which are occurring and be proactive in managing them (2). Skillful leadership is essential.

Transformational Leadership

Of the many leadership theories and characteristics commonly discussed, one that focuses on change is called Transformational Leadership. This type of leadership is characterized by: the leader showing an example and being a role model, inspiring followers to greater heights by helping them see the vision of the organization and their place in the organization, stimulating the employees to be creative and innovative in solving problems, and providing followers with experiences and responsibilities that will challenge them and help them grow (3, 4). Effective Transformational Leadership produces results which are above and beyond the expected results (3). Numerous benefits result from focusing on transformational characteristics, including increased motivation, satisfaction, and work performance (3, 5-7).

Religiosity/Spirituality

This study will also address religiosity; specifically, religiosity and the role it plays in leadership practices. Religiosity and spirituality in the workplace are topics which are receiving more attention in business trade publications because religiosity and spirituality are important factors in the lives of many Americans (8). In the past, religiosity and the workplace were not seen as compatible. As an understanding develops of how trying to separate the “soul” from the workplace seems to be more detrimental than helpful, more attention is focusing on exactly how these factors impact each other (9). Although research about the “soul” and the workplace has increased, studies examining the impact of religiosity on management and leadership are almost nonexistent.

Objective

The purpose of this study is to determine the relationship between religiosity/spirituality and transformational leadership characteristics in directors of hospital foodservice and nutrition services and clinical nutrition managers and those whom they directly supervise.

Hypotheses

- I. Managers who have a higher religiosity score will also have higher transformational leadership scores than managers with lower religiosity scores.

- II. Managers who have a higher religiosity score will receive a higher score when rated by their subordinates regarding transformational leadership characteristics than managers who have lower religiosity scores.
- III. Managers who have a higher religiosity score will have a higher level of agreement regarding statements of spirituality and workplace practices than will those with lower scores.
- IV. Subordinates' ratings of their manager's transformational leadership characteristics will be lower than the manager's self-rating of transformational leadership characteristics.

Limitations

Some limitations of the present study include the fact that some of the factors considered are difficult to conceptualize and measure. Although validated measures have been used where available, even these measures continue to undergo change and improvement as more research is done on these topics.

Another limitation is the fact that not all hospitals in the target population were able to participate, due to restrictions on state-owned hospitals. These facilities are not able to ask or require their employees to participate in research studies.

This study also deals with self-perception, which is always subject to bias. Also, when asking people to evaluate each other, it is difficult to ensure they are rating what is asked instead of other factors which influence their opinions.

Definitions and Abbreviations

Clinical Nutrition Manager (CNM): One of the two types of managers in this study. Supervisor to employees designated as “Clinical Nutrition.”

Director of Food and Nutrition Services (DFNS): The second of the two types of managers in this study. Supervisor to employees designated as “Foodservice/ Supervisors.”

Manager Trust Score (MTS): Obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 4 to 28. On the manager survey it denotes how the managers think their employees view them on matters of trust. On the employee survey it denotes how the employees actually view their managers on matters of trust.

Employee Trust Score (ETS): Obtained by summing the answers to questions 20 through 25, comprising Section D of the survey instrument. Possible scores range from 4 to 42. On the manager survey it denotes how the managers actually view their employees on matters of trust. On the employee survey it denotes how the employees think their managers view them on matters of trust.

Manager: General term for both Clinical Nutrition Managers (CNM) and Directors of Food and Nutrition Services (DFNS), unless the question at hand deals specifically with the type of manager, in which case they are differentiated as above.

Multifactor Leadership Questionnaire Form 5X-Short (MLQ): A validated measure of transformational leadership characteristics developed by Bernard Bass and Bruce Avolio (10). Used in this study to assess the transformational leadership characteristics of managers by both a self-assessment and an assessment by their employees.

Religiosity Score: One validated measure of religiosity (11), takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Spirituality Score: Obtained by combining answers to question #71 (My religious/spiritual beliefs influence my daily life...) with a numeric value from 0 to 6, with answers to question #72 (How often do you pray or meditate?) with a numeric value from 0 to 5. By summing responses to these two questions, a spirituality score ranging from 0 to 11 was possible. These summed scores were further grouped into categories of Low (including summed scores from 0-5), Medium (including summed scores from 6-8), and High Spirituality (including summed scores from 9-11).

Spiritual Influence Score (SIS): Obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range

from 11 to 77. Assesses the influence of the manager's and employee's religious beliefs/spirituality on them in the workplace.

Spiritual Actions Score (SAS): Obtained by summing the answers to questions 12 through 15, comprising Section B of the survey instrument. Possible scores range from 4 to 28. Assesses the religious/spiritual actions of the managers and employees in the workplace.

Transformational Characteristic Scales: Assesses five separate characteristics of transformational leaders. The survey instrument included four questions about each transformational characteristic scale. These included questions 26 through 57 and comprised section Section E of the survey instrument. The scales were as follows:

Idealized Influence—Attributed (IIA)

Idealized Influence—Behavior (IIB)

Inspirational Motivation (IM)

Intellectual Stimulation (IS)

Individual Consideration (IC)

Transformational Leadership Score (TFS): A product of combining the scores from all five scales measuring transformational leadership characteristics. Each scale was comprised of four specific questions about the leadership style of managers with scores ranging from 0 (not at all) to 4 (frequently, if not always). When the scales were combined to create the TFS, scores from 0-80 were possible (five scales x four questions in each scale x four [highest possible score on each question]).

LITERATURE REVIEW

Leadership

The topic of leadership has been of interest for decades, and many theories on what makes a great leader have emerged (12). The first theories to address leadership were the “Great Man” theories. These stated that good leaders were born with certain characteristics and natural abilities. The next set of theories that emerged were the “Trait Theories” which attempted to identify exactly which characteristics could predict successful leadership. “Behavior Theories” followed, which took into account that leadership depended not only on which traits leaders possessed, but on the behaviors they exhibited. “Contingency Theories” went further in stating that different behaviors were effective and necessary depending on the situation at hand. More recently, “Relational Theories” have addressed the fact that leadership is not only dependent on the leader, but is a function of the relationship between the leader and the follower (12).

With the new emphasis on the follower-leader relationship, it is important for leaders to understand their followers, and which issues are most important in facilitating a positive and mutually satisfactory relationship between them (12). There are many things to consider when assessing the follower-leader relationship, and the challenges leaders must face.

Challenges Facing Leaders

Leaders in every field face many challenges. The context of leadership has changed dramatically over the years and is now in a state of rapid change due to

technological advances and increasing global competition (13). Parks (14) stated that, “organizations who do not change will not survive.” Leaders must be aware of the changing environment, especially as it relates to their area of specialty and to those who work for them.

Diversity in the workplace is expanding. These differences among individuals relate to age, gender, ethnicity, and religion. People are also expecting their place of employment to be more than just a place to put in their time and earn a paycheck (13).

In light of these important influences on the workforce, it is important for a leader to understand factors that have an impact on “work environment” or “climate” of the workplace. Some factors that influence workplace “climate” include: flexibility, responsibility, standards, rewards, clarity, and commitment (15). The extent to which a leader positively or negatively influences these factors is a function of their leadership style.

Motivation

In the effort to discover what exactly motivates people, two main schools of thought have emerged. One is that behavior is motivated by an individual’s needs and the other is that a person’s thought processes and how they view a situation motivate behavior (12).

The theories based on an individual’s needs includes Maslow’s (16) hierarchy of needs, which posits that people have higher order (esteem, self-actualization) and lower order (physiological and safety, belonging) needs. Lower order needs must be fulfilled first, but higher order needs are what bring fulfillment and satisfaction.

Herzberg's (17) two-factor theory also considers lower and higher order needs. This theory differentiates between what Herzberg calls hygiene factors and motivators. When hygiene factors (working conditions, pay and security, for example) are absent, the result is dissatisfaction. But satisfaction does not occur if only the hygiene factors are present. For satisfaction to occur, motivators must also be present (i.e. achievement and recognition).

Motivation based on an individual's perceptions has been addressed in the equity and expectancy theories. Equity theory describes the need of individuals to feel that they are being treated fairly in relation to other individuals in a similar position. When a person does not feel that he/she is being treated equitably, motivation decreases and dissatisfaction results (18). Vroom (19) addresses this aspect of motivation as well in his expectancy theory, which describes three different thought processes that must be present for motivation to exist. First, a person must believe that if he/she puts in the effort, the task will be accomplished in a satisfactory manner. Second, a person must believe that if the task is accomplished, the desired outcome will occur. Third, the outcome achieved must be valued by the individual performing the task. If any of these factors is not in place, motivation is unlikely.

For leaders to be successful in motivating their followers, they must be aware of the needs and perceptions of their followers. One important factor in helping meet the higher order needs of employees is empowerment (12). By sharing power and authority with followers, higher order needs can be addressed and met.

Transformational Leadership

Burns (20) was one of the first to begin to describe transformational leadership as leadership that, “occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality.”

Bass (3) further developed this concept by explaining that transformational leadership involves developing a relationship where followers have “love, trust, and confidence” in their leader. Followers grow and develop because their needs are met, and new needs, aspirations, and values emerge (21). Transformational leadership focuses on meeting higher order needs of individuals.

Characteristics of Transformational Leaders

The terms charismatic and transformational leadership are often used interchangeably. This has led to concern from many who are uncertain of the ethics of charismatic leadership, since manipulation is possible (22, 23). Many leaders who have been termed “charismatic” have not led followers to positive ends (i.e. Hitler). Bass and Stiedlmeier (24) have clarified that charisma is only a part of transformational leadership, and that if the leader is egocentric rather than focused on truly helping others, it is more properly termed “pseudo-transformational” leadership. In order to be what Bass and Stiedlmeier term “authentic” transformational leadership, the leader must be motivated to behave ethically, and place others above self.

The factors included in transformational leadership are: charisma or idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (3, 4).

Charisma or idealized influence involves a leader who is a strong role model, who has high moral standards, ethical conduct, and can be counted on to do the right thing. The leader creates a sense of mission and vision in the follower, and as a result the follower deeply respects and trusts the leader (4).

In inspirational motivation, the leader communicates high expectations to followers. In order to help motivate employees, the leader helps them see the vision of and their place in the organization, instead of merely concentrating on the task at hand (4).

Intellectual stimulation is utilized to help followers be more creative and innovative. Leaders encourage others to think beyond the normal boundaries to solve problems, and support the follower in challenging their own beliefs, as well as the beliefs of the leader and the organization (4).

Individualized consideration creates a supportive atmosphere where the leader acts as listener, coach, and advisor to the followers. Leaders also delegate to followers responsibilities which stretch them and help them grow through personal challenges (4).

These characteristics are in contrast to those exhibited in what is described as transactional leadership (3, 4, 20). This form of leadership focuses on the exchange of a reward from the leader for certain efforts from the follower. The transactional leader often gives negative feedback either immediately by constant supervision (called management-by-exception—active), or only when a problem has arisen (called management-by-exception—passive) (4).

Transformational and transactional leadership are not opposite ends of a spectrum, but different skills sometimes employed by the same leader (3). Transactional

leadership seems to focus on expected outcomes, while transformational leadership produces results which are above and beyond the expected results. Although it is beneficial to employ a variety of leadership skills (15), research has shown that many positive results come from practicing transformational characteristics (3, 5-7).

Research Findings on Transformational Leadership

A large amount of research focused on transformational leadership in the past decade; a few of the factors which have been found in relation to this type of leadership are outlined here. Studies have shown that transformational leadership characteristics are positively associated with increased motivation, satisfaction, and work performance (3, 5-7). Women have also been seen to possess more transformational characteristics than men (5). Another factor that may play a role is the culture from which the leader originated. Transformational leadership characteristics may be naturally more prevalent among cultures which are more collectivist (consider the good of the group) than those cultures which are more individualist. (25, 26).

Leadership in Dietetics

“The strength of and support for the management component of our profession has long been a concern to member leadership” (27). Even in the 1950’s Anthony Rourke spoke to the American Dietetic Association (ADA) about this concern. Recent studies have shown that the numbers of dietitians going into management positions has declined (28, 29). Others have expressed concern that management jobs that could be going to dietitians are being filled by people from other areas of specialty (29, 30). This

continues to be a concern to the dietetics profession today, especially in an atmosphere of constant change. Good leaders are needed to help the field of dietetics and dietitians keep abreast of and competitive within these changes (2, 14, 21, 30, 31).

Some of the issues addressed about leadership in dietetics include: the need for enhanced educational programs in leadership skills for students, as well continuing education for current dietitians (28, 30), the need for every experienced dietitian to serve as a mentor for the next generation of dietitians (32), as well as some specific competencies necessary for dietetics leaders to succeed (33).

In 2002 the ADA defined leadership as, “the ability to inspire and guide others toward building and achieving a shared vision (34).” This definition coincides with the current focus on transformational leadership.

Leadership research and theory has evolved, and leaders in the field of dietetics are aware of the current and emerging theories. They are also concerned about the leadership deficiencies which have been discovered through the scant amount of research that has been done on the topic in the field of dietetics. More research on the topic of leadership needs to be done, both to help discover the particular areas of weakness, as well as to determine the best ways to help members of the profession become proficient in leadership skills (14, 35).

Research on Leadership in Dietetics

Research has been conducted specifically in the field of dietetics which has not considered transformational leadership as such, but has examined some of the components of transformational leadership or its purported effects on leaders, followers,

and organizations. Mislevy, et al. (36) reported that leaders who had higher levels of education, worked in larger hospitals, and were more comfortable with information technology had more access to sources of empowerment. Schiller, et al. (37) reported on self-perceptions of dietitians' behaviors as rated by the Life Styles Inventory. The most dominant behaviors were "self-actualize" (a positive predictor of leadership effectiveness) and "dependent" (a self-defeating, negative predictor of leadership effectiveness). Comparisons with demographics showed that those exhibiting more dependence were more likely to be new to the field and to have achieved no higher education than a bachelor's degree. Molt (38) found that dietitians reported certain types of experience helped develop leadership skills. Some of the experiences which were helpful in developing leadership skills included experience with specific assignments where the dietitian had a major responsibility, as well as experience working with others, working with professional service activities, and volunteer service.

Transformational Leadership in Dietetics

A small number of studies have been done assessing transformational leadership specifically in the field of dietetics. Using the Leadership Behavior Questionnaire (LBQ), Arensberg, et al (39) found that clinical nutrition managers were identified as having some aspects of transformational leadership. The managers rated lowest on the communication leadership score, and highest on the respectful leadership score. Also of note was the fact that clinical nutrition managers rated themselves higher than their subordinates rated them in almost all of the leadership scores.

Dykes (40) reported on the transformational leadership behaviors of dietetics education program directors in two- and four-year institutions. Directors in both types of institutions rated themselves as possessing transformational leadership characteristics, which corresponded with scores from colleagues and superiors. Directors in two-year institutions scored lower on communication leadership than did those in four-year institutions. Dykes (28) hypothesized that this may be related to the finding that more directors in four-year institutions were tenured and had doctoral degrees, as well as being older than those in two-year institutions.

In a study of dietetic interns using the Multifactor Leadership Questionnaire (MLQ), Burzminski (41) reported that dietetic interns self-reported higher levels of transformational than transactional leadership characteristics. Demographics were examined in relation to leadership characteristics, and no significant differences were found in relation to age, gender, education level, or formal leadership training.

Religiosity and Spirituality Trends in America

Nationally, religious preference was reported in 1998 as 59% Protestant, 27% Catholic, and 6% with no religious preference (8). The General Social Surveys (GSS) for 2002 (42) found that 47.2% of the adult population attended church services one or more times per week. Gallup and Lindsay (8) reported that seven out of ten Americans are members of a church or synagogue. The GSS (42) also reported that 56.3% of the population prayed one or more times per day. Of those who reported never attending church, 35.8% reported praying one or more times daily, while 42.2% of those who attended at least once a month prayed one or more times daily. The frequency of praying

one or more times daily increased further to 66.2% of those who attend at least weekly, and 86.6% of those who attend more than once per week.

Females tend to be more religious than males. The GSS (42) reported that 38.6% of males reported attending church one or more times a week, while 59.3% of females attended one or more times per week. The number of males reported praying one or more times daily was 42.5%, while 68.6% of females did (42). Also, Gallup and Lindsay (8) reported that 67% of American women reported that religion is very important in their lives, with 53% of American men reporting the same.

Gallup and Lindsay (8) also reported differences in importance of religion based on ethnic background. The poll found that 58% of Whites reported that religion was very important in their lives, while 85% of Blacks and 75% of Hispanics stated that religion is very important in their lives.

The GSS (42) reported church attendance among different age groups, with a trend of increased church attendance from the youngest to the oldest age group. Frequency of prayer was reported as well, with a similar trend. Gallup and Lindsay (8) also report the increases in the importance of religion when considering the difference between age groups. They found that 46% of those ages 18 to 29 regarded religion as very important in their lives, while 79% of those ages 65 to 74 reporting that religion was very important in their lives. It was not reported whether these differences were significant, but these trends agree with Argue, et al. (43), who found that there is a significant non-linear relationship between age and religiosity, with the highest increases occurring in those age 18-30.

Since religion is a factor that influences the lives of so many Americans, it also influences America's workplace. The corporate world is changing, and developing a "work environment" is becoming more important. Izzo and Klein (44) stated, "To create such workplaces requires that leaders become students of the changing values of workers."

Religiosity and Spirituality in the Workplace

Finding meaning in their work has become an increasingly high priority for American employees (45). Mitroff and Denton (9) found that in order to have meaning in their work, people need to be able to realize their full potential as a person. Although expressing the whole person is important, most workers feel that they can express their "thinking" side much more easily than their "feeling" side at work. Workplaces are asking more of their employees, and some employees are contending that if their places of employment want more, they will have to be willing to accept the whole person, including the soul (9, 46).

Some other reasons for the increasing interest in religion and spirituality in the workplace have been examined. One is that people are spending more and more time in the workplace, and it is becoming increasingly difficult for employees to limit their spiritual lives to after work hours and one day a week (47). Workplaces may also be seen as increasingly unstable as downsizing and layoffs occur. Employees who remain in such a workplace often find that the spiritual climate of the workplace can have an effect on helping them cope with uncertainty (48). A related topic is the recent corporate scandals

which have occurred, causing more people to take a closer look at ethics, and often consider spirituality in the workplace as well (46, 49).

The benefits of spirituality in the workplace have also been reported. Individuals and organizations who perceived themselves as more “spiritual” are more creative, productive, and adaptive, since work is connected to a bigger picture (9). Laabs (50) points out that people find deeper meaning and rewards in the workplace when spirituality is part of the climate. Productivity (50) morale (50, 51), and employee satisfaction (48) have also been seen to increase when spirituality is part of the workplace. Companies with a “strong spirit” have been reported to outperform “less spirited” companies (47), and some suggest that struggling companies could be completely transformed by spiritual values (52). Some of the dangers of ignoring the spirit in the workplace could include: people falling short of their potential, decreased creativity, fear, and resistance to change (53), as well as high turnover, burnout, and absenteeism (51).

The forms which religiosity and spirituality have taken in the workplace differ. It is not a matter of promoting a certain religion, although legal issues of accommodating specific religious practices for individual employees have also increased (54, 55). Religious and spiritual expressions in the workplace have taken many forms, but however these issues are addressed, it is becoming increasingly clear that organizations and leaders would benefit from addressing them.

The issues of religiosity and spirituality in the workplace are often discussed in popular business literature. Studies of religiosity/spirituality in the workplace have increased, although studies of leadership or management and religiosity are few.

Religiosity in Dietetics

One study done in the field of dietetics suggests that religiosity is prevalent among dietitians. In Skousen's (56) sample of dietitians in management positions, religiosity/spirituality was examined using frequency of attendance at worship services. There were 48% of those surveyed who had attended worship services at least four times in the previous month. Almost 77% of respondents stated that they followed God's (a Supreme Being's) example in interactions at work, and almost 75% of respondents reported relying on spiritual insight to make decisions at work, as well as expressing their spiritual beliefs through their actions at work.

Another study, done in conjunction with the current study, examined issues of trust and religiosity/spirituality among foodservice and nutrition managers and those whom they directly supervise (57). Oler (57) found that directors and employees who had higher Religiosity and Spirituality Scores were also more likely to be influenced by their spiritual beliefs at work, and were more likely to exhibit more spiritual actions at work. However, the religiosity and spirituality of managers and employees did not seem to impact the way these two groups viewed one another on aspects of trust.

This study will strive to determine the relationship between religiosity/spirituality and transformational leadership characteristics in Directors of Foodservice and Nutrition, Clinical Nutrition Managers, and those whom they directly supervise.

METHODS

The research design included two survey questionnaires. One questionnaire was designed for the managers, either of hospital food and nutrition departments or clinical nutrition managers; the correlating questionnaire was designed for those reporting directly to them. Manager and employee responses to specific sections of the survey were compared.

Sampling and Sample Size

The sample was selected from the 918 hospitals from 250-499 beds in the American Hospital Association database. The targeted groups within the hospitals were the Directors of Food and Nutrition Services (DFNS), Clinical Nutrition Managers (CNM), and those they directly supervise. Hospitals from which the DFNS responded affirmatively to our request for participation were included in the sample.

Instrumentation

The general structure of the questionnaires was the same for the managers (Appendix A) and for their employees (Appendix B). It included six sections (A-F). Figure 1 shows the composition and content of sections A-D. Responses in these sections ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). The sections were as follows:

- Section A, entitled “My religious beliefs/spirituality...” examined the extent to which a person’s religiosity/spirituality influenced their work.

- Section B, “I often...” examined the extent to which participants’ religiosity impacted their actions in the workplace.
- Sections C and D on the manager questionnaire asked questions beginning with the statements, “In general, my employees view me as...” or “In general, my employees are...”. Sections C and D on the employee questionnaire asked questions beginning with the statements, “In general, my director/manager is...” or “In general, my director/manager views me as...”. These questions were designed to measure the perception of the respondent regarding certain characteristics associated with trust in the opposite party or to assess how the manager thought their employees viewed them, and vice versa.

Figure 1: Structure of survey sections A-D

	Manager Survey	Employee Survey
Section A: Questions 1-11	Stem: “My religious beliefs/spirituality...” Influence of religiosity/spirituality in workplace	Stem: “My religious beliefs/spirituality...” Influence of religiosity/spirituality in workplace
Section B: Questions 12-15	Stem: “I often...” Evidence of religiosity/spirituality in workplace actions	Stem: “I often...” Evidence of religiosity/spirituality in workplace actions
Section C: Questions 16-19	Stem: “In general, my employees view me as...” Manager perception of employee view of manager	Stem: “In general, my director/manager is...” Employee view of manager
Section D: Questions 20-25	Stem: “In general, my employees are...” Manager view of employee	Stem: “In general, my director/manager views me as...” Employee perception of manager view of employee

Section E (questions 26-57) is adapted from Bass and Avolio’s Multifactor Leadership Questionnaire (MLQ) form 5X-Short (10). The MLQ is specifically designed to measure transformational and transactional leadership characteristics. It has been used

extensively in leadership research, and has been tested for validity and reliability. On the manager survey the participants answered the questions about their perception of their own leadership style. On the employee survey, the participants answered the questions based on their perception of their manager's leadership style.

The questions in section E are grouped into seven different scales of four questions each. The scales measure the specific aspects of transformational (five scales) and transactional (two scales) leadership, and are shown in Figure 2. The five scales measuring aspects of transformational leadership are: Idealized Influence—Attributed (IIA), Idealized Influence--Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC). Scales measuring aspects of transactional leadership were also included (Contingent Reward, and Management-by-Exception—Active). Although transactional characteristics were not examined in this study, it is important that they were not removed from the survey instrument. Their inclusion helped maintain the integrity of the MLQ, offering a broader range of leader behaviors than are included in the transformational characteristics alone.

Figure 2: Structure of survey section E

Transformational Characteristic Scales	Transactional Characteristic Scales
Idealized Influence—Attributed (IIA) Questions 33, 41, 44, and 48	Contingent Reward (CR) Questions 26, 34, 39, and 56
Idealized Influence--Behavior (IIB) Questions 30, 37, 46, and 55	Management-by-Exception—Active (MEA) Questions 29, 45, 47, and 50
Inspirational Motivation (IM) Questions 32, 36, 49, and 57	
Intellectual Stimulation (IS) Questions 27, 31, 52, and 54	
Individual Consideration (IC) Questions 38, 42, 51, and 53	

In scoring the MLQ, the seven scales are often looked at separately, as each is a different and specific aspect of transformational or transactional leadership. It is useful to also look at the scales in summed scores of transformational and transactional leadership,

which has been done in other studies. This has been shown to be valid due to the high degree of intercorrelation between the scales included in the more general categories of transformational and transactional leadership (58, 59). In this study the combined scales were used to form one Transformational Leadership Score (TFS). Certain individual scales of transformational leadership were also examined.

Section F was composed of questions about the participant. Basic demographic questions were included (questions 58-64) as well as job-specific questions (#65-68). Finally, section F included questions about respondents' religiosity (question #69) and spirituality (questions 71-72).

Procedures

The steps included in carrying out the research included: obtaining approval for the study (Appendix C), conducting a pilot study (Appendix D), obtaining a sample of those willing to participate (Appendix E), distributing the surveys to participants (Appendix F), and following up to encourage participation (Appendix G-I).

Approval

Approval to conduct this research was obtained from the Institutional Review Board for Human Subjects (IRB) at Brigham Young University (Appendix C). In the cover letter which comprised the front page of the survey, the participants were informed that participation was voluntary and that informed consent was assumed if they completed and returned the survey (Appendix A and B).

Pilot Study

Before administering the survey to the entire sample, three of the 918 hospitals in the American Hospital Association (AHA) database were randomly selected for the pilot study, leaving 915 hospitals. The DFNS was contacted by telephone; a description of the research was given, and consent to send pilot survey questionnaires to their hospital was obtained.

The packets sent to managers for review included the following:

- a) A cover letter with directions on the administration and evaluation of the pilot survey for themselves and a small sample of their employees (Appendix D).

The survey components:

- b) The initial cover letter which would be sent to the DFNS requesting participation and giving directions for how to participate (Appendix E).
- c) A response postcard which would be sent with the initial cover letter mentioned above requesting further information from individual managers (Appendix E).
- d) The cover letter which would be sent with the surveys (Appendix A and B).
- e) The survey instrument (Appendix A-B).
- f) Letter of instructions which would be sent to managers willing to participate with the packet of surveys (Appendix F).

The pilot survey also included a separate questionnaire about the clarity and acceptability of all of the relevant pieces described above so that adjustments could be made if necessary before beginning the actual study (Appendix D). No changes were necessary in the survey instrument or procedures for distributing them based on the findings of the pilot study.

Distribution of Survey Questionnaires

The AHA database did not include the names of the individual DFNS for each hospital, so the initial letter sent to each hospital was addressed simply to the DFNS. The envelope contained a letter for the DFNS and a letter for the CNM (Appendix E). The letters were virtually the same, and explained the nature of the study and asked for participation. Also included in the envelope were two postage-paid postcards, one each for both the DFNS and CNM (Appendix E). The response postcard could be used to quickly indicate willingness to participate. Managers who were willing to participate answered a few questions about their hospital, and the number of employees they supervised. Those not willing to participate could simply check the box marked “No” to be removed from the mailing list. Although initial communication was solely to the DFNS, follow-up communication was directed to the individual (either DFNS or CNM) who filled out each postcard, using the names and addresses and other information included on the postcards.

Packets were sent to each manager who affirmed willingness to participate. The packet included:

- A letter of explanation for the manager on the packet contents and how to distribute them (Appendix F),
- One cream colored manager survey for themselves (Appendix A),
- A blue employee survey for each employee the manager supervised (Appendix B), and
- Business reply envelopes for each survey.

Follow-up

Three to four weeks after the initial survey packets were sent, an initial follow-up was sent to remind the managers who had not responded to do so and requesting that they remind their employees as well. This reminder was sent by e-mail if the manager had included an e-mail address on the postcard, or by letter if no e-mail address was available (Appendix G). This letter/e-mail included contact information for the manager to request additional surveys if needed. A second survey packet was sent out if necessary.

One month after the first follow-up, another e-mail/letter was sent (Appendix H). Since research inclusion required a response from a manager as well as at least one of their employees, this follow-up was directed at the following:

- Those hospitals where a manager had responded, but none of their employees had responded;
- Those hospitals from which employees had responded, but their manager had not; and
- Hospitals where there had been no response from manager or employees.

A short time later, a final follow-up/invitation to participate was sent to those managers who had not responded but at least one of their employees had (Appendix I). This letter reminded managers that the surveys filled out by their employees would not be useable without their response.

Out of the 915 hospitals invited to participate, 178 managers from 129 facilities responded. Those managers requested 1,763 employee surveys.

Data Analysis

The following subscores were determined from various sets of questions: SIS (Spiritual Influence Score), SAS (Spiritual Action Score), MTS (Manager Trust Score), ETS (Employee Trust Score), Idealized Influence—Attributed (IIA), Idealized Influence—Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), Individual Consideration (IC), and Transformational Score (TFS). Questions comprising these summed subscores are summarized in Figure 3.

Figure 3: Questions comprising summed subscores

Subscore:	Questions:
Spiritual Influence Score (SIS)	Section A, #1-11
Spiritual Action Score (SAS)	Section B, #12-15
Manager Trust Score (MTS)	Section C, #16-19
Employee Trust Score (ETS)	Section D, #20-25
Five Transformational Characteristics Scales:	Section E:
Idealized Influence—Attributed (IIA)	#33, 41, 44, and 48
Idealized Influence—Behavior (IIB)	#30, 37, 46, and 55
Inspirational Motivation (IM)	#32, 36, 49, and 57
Intellectual Stimulation (IS)	#27, 31, 52, and 54
Individual Consideration (IC)	#38, 42, 51, and 53
Transformational Score	Combination of five scales above

In addition, a summed Spirituality Score was created by combining the responses to question 71 and question 72. Question 71 (My religious/spiritual beliefs influence my daily life) had answers ranging from Strongly disagree (0) to Strongly agree (6). Question 72 (How often do you pray or meditate?) had answers ranging from never (0) to daily (5). By combining the answers on questions 71 and 72, a score from 0-11 was possible. The Spirituality Score was further categorized as low spirituality (0-5), moderate spirituality (6-8), and high spirituality (9-11). The Religiosity Score (question 69) was simply a measure of attendance at worship services in the previous month, ranging from 0 (never attended) to 4 (attended 4 or more times).

Frequency data was collected for all individual questions separately, as well as for summed subscores. Frequency tables were formulated for manager religiosity by spirituality and employee religiosity by spirituality. Frequency tables and Chi-Square tests for independence were also utilized to determine the relationship between Religiosity and Spirituality Scores and manager and employee job enjoyment, as well as employee intentions to change jobs in the near future.

General Linear Model (GLM) was used to determine the relationship between employee and manager religiosity and spirituality scores and the manager's transformational characteristic scores as well as the summed transformational score (TFS) as rated by both manager and employee. This was also done for manager and employee SIS and SAS scores, MTS and ETS scores, most demographic questions, and some job-related questions in comparison to Religiosity Scores, Spirituality Scores, Transformational Characteristic Scores, and TFS. SIS and SAS were also compared using GLM with most demographic questions, and some job-related questions.

Pearson's Correlation was used to determine the relationship between TFS and SIS, SAS, MTS, and ETS as rated by both managers and employees. Pearson's Correlation was also used to determine the relationship between manager Religiosity and Spirituality scores and SIS, SAS, MTS, ETS, transformational leadership characteristic scores, and TFS. Manager-rated SIS and SAS were also compared with employee-rated MTS and ETS using Pearson's Correlation. This test was also used to determine manager perceptions of employee job commitment and employees' intent to change jobs in the near future.

Internal validity on the survey questionnaire was examined using Pearson's Correlation. The correlations between questions about whether a person's religious beliefs helped them make decisions in the workplace, and questions about whether a person's religious beliefs were a part of workplace discussions were evaluated on both the manager and employee questionnaires, as well as questions pertaining to job commitment on the employee questionnaire.

The Mean's Procedure as well as Pearson's Correlation were used to determine if the employees' assessment of their manager's transformational characteristic scores and TFS were significantly different from the manager's assessment of their own transformational characteristic scores and TFS, and to what degree they were correlated.

Cronbach's Alpha was used on the transformational leadership characteristic scales to determine the degree to which these scores were intercorrelated in this study, and whether or not it would be valid to combine them into a summed transformational score.

RESULTS

Directors of Food and Nutrition Services at all 915 hospitals (after subtracting the three used in the pilot survey) in the American Hospital Association database with 299-450 beds were invited to participate in the study. Of these, at least 63 were state-owned hospitals, and as a result were unable to ask or require their employees to participate. Of the remaining 852 hospitals, managers at 129 facilities stated that they were willing to participate (15% of eligible facilities). There were 178 manager surveys and 1,763 employee surveys sent to the 129 participating hospitals. Of these, 129 managers (72%) and 530 employees (30%) returned surveys that were useable in the study. In order to be used in the study, responses from both a manager and at least one of their subordinates were necessary. The percentage of employees actually participating may not be accurate since the numbers used were supplied by the managers, and several reported an unlikely, high number of employees.

Demographics of Sample

See **Table 1** for a complete list of respondent demographic characteristics. Of the hospitals included, 50.8% were considered small facilities (≤ 350 beds) and 49.2% were considered large (> 350 beds). Most (51.2%) of the 129 managers were the DFNS, and 48.8% were the CNM. Of the 530 employees included in the study, 37.7% reported directly to a DFNS, and 62.6% reported directly to a CNM.

The majority of both managers (93.0%) and employees (80.9%) were Caucasian. Of managers, 83.0% were female, while 90.4% of employees were female. The largest

Table 1. Demographic Characteristics of Respondents

Characteristic	Manager		Employee	
	n	%	n	%
Hospital Size				
Small ≤ 350 beds	63	50.8		
Large >350 beds	61	49.2		
Type of Manager				
Director of Food and Nutrition Services	66	51.2		
Clinical Nutrition Manager	63	48.8		
Type of Employee				
Foodservice/Supervisors			198	37.7
Clinical Nutrition			332	62.6
Ethnic Group				
African American	2	1.6	42	8.1
Asian and Pacific Islander	3	2.3	29	5.6
Caucasian	120	93.0	419	80.9
Hispanic	2	1.6	18	3.5
Native American	2	1.6	6	1.2
Other	0	0	4	0.8
Gender				
Female	107	83.0	473	90.4
Male	22	17.0	50	9.5
Age				
21-30	9	7.0	153	29.3
31-40	28	21.9	147	28.1
41-50	57	44.5	136	26.0
51-60	33	25.8	73	14.0
more than 60	1	0.8	14	2.7
Level of Education				
High School Diploma or GED	1	0.8	71	13.6
Associate's Degree	5	3.9	51	9.7
Bachelor's Degree	42	32.6	220	42.0
Master's Degree	60	46.5	102	19.5
Some post grad, but no degree	19	14.7	76	14.5
Doctoral Degree	2	1.6	4	0.8
Area of Degree				
Business/Management	12	11.5	10	2.9
Dietetics	19	18.3	105	30.9
Foodservice/Culinary	4	3.9	5	1.5
Food Science and Nutrition	10	9.6	29	8.5
Nutrition	48	46.2	157	46.2
Other	11	10.6	30	10.0
Pay/Salary				
\$10,000-19,000/yr	0	0.0	56	11.1
20,000-30,000/yr	1	0.8	127	25.2
31,000-40,000/yr	2	1.6	173	34.2
41,000-50,000/yr	31	24.8	112	22.2
51,000-60,000/yr	13	10.4	166	3.2
61,000-70,000/yr	30	24.0	18	3.6
>70,000/yr	48	38.4	3	0.6
Hours/week				
Full time	125	97.7	411	78.9
Part time	3	2.3	110	21.1

Table 1. Demographic Characteristics of Respondents Continued

Characteristic	Manager		Employee	
	n	%	n	%
Time in All Management Positions				
less than one year	3	2.3		
1-5 years	26	20.3		
6-10 years	14	10.9		
11-20 years	37	28.9		
more than 20 years	48	37.5		
Time in Current Position				
less than one year	14	10.9	74	14.2
1-2 years	35	27.1	104	20.0
3-5 years	31	24.0	133	25.5
6-8 years	14	10.9	45	8.6
9-11 years	8	6.2	47	9.0
12-14 years	12	9.3	35	6.7
more than 14 years	15	11.6	84	16.1
Hired from Outside or Within Hospital				
Outside hospital	66	51.2		
Inside hospital	63	48.8		
Time Worked with Current Manager				
less than one year			99	19.0
1-5 years			294	56.2
6-10 years			69	13.2
11-20 years			45	8.6
more than 20 years			16	3.1
Enjoy Current Job				
Strongly agree	72	55.8	173	33.0
Agree	45	34.9	237	45.2
Somewhat agree	11	8.5	80	15.3
Neither agree or disagree	0	0.0	13	2.5
Somewhat disagree	1	0.8	17	3.2
Disagree	0	0.0	3	0.6
Strongly disagree	0	0.0	1	0.2
Considering a Job Change				
Strongly agree			48	9.2
Agree			37	7.1
Somewhat agree			79	15.1
Neither agree or disagree			105	20.0
Somewhat disagree			25	4.8
Disagree			131	25.0
Strongly disagree			99	18.9

Table 1. Demographic Characteristics of Respondents Continued

Characteristic	Manager		Employee	
	n	%	n	%
Religious Preference				
Atheist	0	0.0	1	0.2
Buddhist	1	0.8	6	1.2
Catholic	40	31.0	158	30.5
Christian (other)	10	7.7	38	7.4
Hindu	0	0.0	1	0.2
Jewish	6	4.6	14	2.7
LDS	9	7.0	29	5.6
Muslim	0	0.0	4	0.8
Protestant	54	41.9	208	40.2
None	5	3.9	25	4.8
Other	4	3.1	33	6.4
Monthly Attendance at Worship Service (Religiosity Score)				
0	38	29.5	162	31.5
1	13	10.8	55	10.7
2	13	10.8	61	11.8
3	13	10.8	50	9.7
4 or more	52	40.3	187	36.3
Religious/Spiritual Beliefs Influence				
Strongly agree	50	39.1	221	42.3
Agree	44	34.4	158	30.2
Somewhat agree	20	15.6	89	17.0
Neither agree or disagree	6	4.7	32	6.1
Somewhat disagree	2	1.6	3	0.6
Disagree	4	3.1	11	2.1
Strongly disagree	2	1.6	9	1.7
Frequency of Prayer or Meditation				
Daily	54	41.9	248	47.3
Most days	32	24.8	112	21.4
Once or twice a week	17	13.2	64	12.2
A few times a month	5	3.9	45	8.6
Seldom	13	10.1	43	8.2
Never	8	6.2	12	2.3
Spirituality Score^a				
Low (0-5)	16	13.3	47	10.7
Moderate (6-8)	30	23.4	86	18.0
High (9-11)	81	63.3	341	71.3

^a The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

percentage of managers were in the 41-50 years age group (44.5%) while employees were fairly evenly distributed across age groups.

Seventy-nine percent of managers held either a Bachelor's or Master's degree. Of employees, 42.0% had a Bachelor's degree. The degrees held by managers were predominantly in nutrition or food science and nutrition (55.8%), followed by 18.3% in dietetics, and 11.5% in business/management. Over half (54.7%) of employees held degrees in nutrition or food science and nutrition, and 30.9% in dietetics.

The largest percentage of managers (38.4%) had salaries of more than \$70,000 per year, with 24.0% having salaries in the range of \$61,000 to \$70,000 dollars per year. An overwhelming majority of managers (97.7%) worked full time. The largest percentage of employees (34.2%) had salaries in the \$31,000 to \$40,000 range, with 36.2% reporting lower salaries, and 29.6% reporting higher salaries. These numbers include 78.9% of employees who work full time.

Job Related Questions

See **Table 1**. The majority of managers had been in management positions at least 11 years, but time in their current position varied greatly, with the largest percentage in the 1-2 years category (27.1%). Managers hired to their current position from outside of the hospital constituted 51.2% of those surveyed, while 48.8% were hired from within the hospital.

Of employees, 59.7% had been in their current position from less than one year to five years, and 16.1% of employees had been in their current position for more than 14

years. Most employees (75.2 %) had worked with their current manager for less than five years, and 24.9% had worked with their current manager for six years or more.

Most managers (90.7%) agreed or strongly agreed that they enjoy their role as manager, and 78.2% of employees agreed or strongly agreed that they enjoy their current job. Only 31.4% of employees agreed to some degree that they were planning a job change in the near future.

Religiosity and Spirituality

Religious preferences of managers showed that 41.9% belonged to a Protestant Church, 31.0% were Catholic, and 3.9% had no religious preference. For employees, 40.2% were Protestant, 30.5% were Catholic, and 4.8% had no religious preference. See **Table 1**.

Monthly attendance at worship services was reported, with 40.3% of managers attending four or more times in the previous month and 36.3% of employees attending four or more times in the previous month. Of managers, 73.5% reported that they agreed or strongly agreed that their religious/spiritual beliefs influence their daily lives, and 72.5% of employees reported the same. A majority of managers (66.7%) and employees (68.7%) reported that they pray or meditate most days or daily. The spirituality scores showed that 63.3% of managers and 71.3% of employees fit into the “high” spirituality category.

Transformational Leadership Scores

Cronbach's Alpha was used to determine intercorrelation between individual transformational scales. This has been done in other studies to determine the validity of forming a summed Transformational Leadership Score (TFS) by combining the individual scales. The Cronbach's Alpha for manager surveys was 0.84, and for employee surveys it was 0.95. Due to these high levels of intercorrelation, a TFS was used to compare transformational leadership with a variety of other factors.

The Transformational Leadership Score (TFS) is a product of combining the scores from all five scales measuring transformational leadership characteristics. The method of obtaining this summed score is described in the Definitions section in the Introduction.

Frequencies of manager and employee responses on individual transformational scores were determined (**Table 2**). There were large differences observed between manager and employee perceptions of transformational leadership scales, although significance was not determined by this method. However, it is interesting to note the discrepancies in level of agreement with individual questions which make up each scale. The largest discrepancy was found in the Individual Consideration (IC) scale between 95.4% of managers who agreed that they consider an individual as having different needs, abilities, and aspirations from others, and only 49.7% of employees who agreed that their manager fit this description (**Table 2**). For The Idealized Influence—Attributed (IIA) scale, two questions each had a difference of 25.6%, which was the case for both the question concerning going above self-interest for the good of the group (94.6% of managers agreed to this question, and 69.0% of employees agreed that their managers

Table 2. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership Characteristics^a

Idealized Influence, Attributed (IIA)						
Manager Responses	Frequently^b		Sometimes		Not at all	
	n	%	n	%	n	%
I go beyond self-interest for the good of the group	122	94.6	7	5.4	0	0.0
I act in ways that build others' respect for me	120	93.8	8	6.3	0	0.0
I display a sense of power and confidence	95	73.6	32	25.6	1	0.78
I instill pride in others for being associated with me	88	68.2	38	29.4	3	2.33
Employee Responses						
My director/manager...						
goes beyond self-interest for the good of the group	359	69.0	131	25.2	30	5.8
acts in ways that builds my respect	354	68.2	135	26.0	30	14.1
displays a sense of power and confidence	375	72.0	130	25.0	16	10.2
instills pride in others for being associated with him/her	332	63.9	137	26.3	51	9.8
Idealized Influence, Behavior (IIB)						
Manager Responses						
I consider the moral and ethical consequences of decisions	116	89.9	13	10.1	0	0.0
I emphasize the importance of having a collective sense of mission	108	83.7	21	16.3	0	0.0
I specify the importance of having a strong sense of purpose	106	82.2	23	17.8	0	0.0
I talk about my most important values and beliefs	55	42.6	68	52.7	6	4.7
Employee Responses						
My director/manager...						
considers the moral and ethical consequences of decisions	347	67.4	147	28.5	21	4.08
emphasizes the importance of having a collective sense of mission	327	63.0	158	30.4	34	6.6
specifies the importance of having a strong sense of purpose	312	59.9	164	31.5	45	8.6
talks about their most important values and beliefs	138	26.6	274	52.8	107	20.6

Table 2. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership Characteristics^a Continued

Inspirational Motivation (IM)						
Manager Responses	Frequently		Sometimes		Not at all	
	n	%	n	%	n	%
I express confidence that goals will be achieved	123	95.4	6	4.7	0	0.0
I talk enthusiastically about what needs to be accomplished	120	93.0	9	7.0	0	0.0
I talk optimistically about the future	114	89.1	14	10.9	0	0.0
I articulate a compelling vision of the future	94	72.9	34	26.4	1	0.78
Employee Responses						
My director/manager...						
expresses confidence that goals will be achieved	404	77.4	105	20.1	13	2
talks enthusiastically about what needs to be accomplished	377	72.2	131	25.1	14	2.8
talks optimistically about the future	386	74.2	115	22.1	19	3.65
articulates a compelling vision of the future	322	62.0	159	30.6	38	7.3
Intellectual Stimulation (IS)						
Manager Responses						
I seek differing perspectives when solving problems	115	89.2	14	10.9	0	0.0
I suggest new ways of looking at how to complete assignments	115	89.2	14	10.85	0	0.0
I get others to look at problems from many different angles	114	88.4	15	11.6	0	0.0
I re-examine critical assumptions to question whether they are appropriate	108	83.7	20	15.5	1	0.78
Employee Responses						
My director/manager...						
seeks differing perspectives when solving problems	330	63.5	167	32.1	23	4.4
suggests new ways of looking at how to complete assignments	284	54.4	189	36.2	49	9.4
gets me to look at problems from many different angles	280	54.0	201	38.7	38	7.3
re-examines critical assumptions to question whether they are appropriate	311	61.5	179	35.4	16	3.2

Table 2. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership Characteristics^a Continued

Individual Consideration (IC)						
Manager Responses	Frequently		Sometimes		Not at all	
	n	%	n	%	n	%
I help others develop their strengths	125	96.9	4	3.1	0	0.0
I consider an individual as having different needs, abilities, and aspirations from others	123	95.4	6	4.7	0	0.0
I treat others as individuals rather than just a member of the group	115	90.6	11	8.7	1	0.8
I spend time teaching and coaching	114	88.4	15	11.6	0	0.0
Employee Responses						
My director/manager...						
helps me to develop my strengths	327	62.6	154	29.5	41	7.9
considers me as having different needs, abilities, and aspirations from others	256	49.7	179	34.8	80	15.5
treats me as an individual rather than just a member of the group	411	79.2	87	16.8	21	4.1
spends time teaching and coaching	243	46.6	227	43.6	51	9.8

^a The questions in this table come from the MLQ Form 5X-Short and are grouped into the separate Transformational Leadership Scales (i.e. IIA, IIB, IM, IS, IC).

^b Response categories have been collapsed into three categories, Frequently (includes responses=3-4), Sometimes (includes response=2), and Not at all (includes responses=0-1).

fit this description), and the question about acting in ways that build others' respect. Fully 93.8% of managers agreed to this statement, while only 68.2% of employees agreed that this statement described their manager (**Table 2**). Similar discrepancies were found for questions from the Individualized Influence—Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC) scales.

Using the Mean's Procedure, managers were shown to rate themselves significantly higher than their employees rated them on all separate scales of transformational leadership characteristics, as well as the summed TFS (all $p < .0001$, except for IIA $p = .0068$). Using Pearson's Correlation Procedure, only the scales for Idealized Influence—Behavior ($r = 0.236$, $p = .0089$), and Inspirational Motivation ($r = 0.282$, $p = .0018$) showed any significant correlation between manager responses and employee responses. When manager self-ratings increased in these two categories, employee-ratings also increased, while the rest of the scales showed no such relationship.

Transformational Leadership Scores and Demographics

Table 3 shows TFS and demographic characteristics. Using GLM, there were no significant differences in TFS as rated by the manager (self-perception) between ethnic groups. Among employees, Hispanics rated their manager's TFS higher (64.8) than did Asian and Pacific Islanders (50.6) and Caucasian employees (53.1). African American employees also rated their manager's TFS higher (58.8) than did Caucasian employees (53.1). Regardless of employee ethnicity, employees rated their Caucasian manager's TFS higher (54.8) than Asian and Pacific Islander managers (37.0).

Table 3. Summed Transformational Leadership Scores (TFS)^a and Demographic Characteristics

	Manager Demographics by Self-Rated TFS				Employee Demographics by Employee-Rated TFS				Manager Demographics by Employee-Rated TFS			
	n	%	TFS LS Mean ± SE		n	%	TFS LS Mean ± SE		n	%	TFS LS Mean ± SE	
Ethnic Group:												
African American	2	1.6	74.0	±7.86	42	8.1	58.8	±2.76 ³	2	1.6	49.5	±9.31
Asian and Pacific Islander	3	2.3	66.7	±4.54	29	5.6	50.6	±3.48 ⁴	3	2.3	37.0	±7.6 ³
Caucasian	120	93.0	64.0	±0.73	419	80.9	53.1	±0.88 ^{1,4}	120	93.0	54.8	±1.26 ²
Hispanic	2	1.6	56.0	±5.56	18	3.5	64.8	±4.01 ^{2,3}	2	1.6	60.6	±9.31
Native American	2	1.6	68.0	±5.56	6	1.2	59.7	±6.95	2	1.6	57.2	±9.31
Other	0	0	0.0	±0.00	4	0.8	50.8	±8.51	0	0	0.0	±0.00
Gender:												
Female	107	83.0	63.9	±0.77	473	90.4	53.8	±0.82	107	83.0	53.7	±1.33
Male	22	17.0	65.4	±1.72	50	9.5	56.7	±0.79	22	17.0	57.9	±2.96
Age:												
18-20	0	0.0	0.0	±0.00	0	0.0	0.0	±0.00	0	0.0	0	±0.00
21-30	9	7.0	65.2	±2.62	53	29.3	52.8	±1.46	9	7.0	57.5	±4.70
31-40	28	21.9	62.8	±1.49	147	28.1	53.6	±1.51	28	21.9	54.2	±2.66
41-50	57	44.5	63.4	±1.07	136	26.0	54.8	±1.52	57	44.5	52.9	±1.81
51-60	33	25.8	65.8	±1.37	73	14.0	56.6	±2.16	33	25.8	57.1	±2.43
≥ 60	1	0.8	73.0	±7.86	14	2.7	53.1	±4.75	1	0.8	55.0	±13.3
Education:												
High School Diploma/GED	1	0.8	66.0	±7.86	71	13.6	56.7	±2.17 ⁵	1	0.8	31.7	±13.14
Associate Degree	5	3.9	61.8	±3.52	51	9.7	55.0	±2.52	5	3.9	52.2	±6.57
Bachelor's Degree	42	32.6	62.8	±1.21	220	42.0	54.4	±1.22 ⁵	42	32.6	51.9	±2.08
Master's Degree	60	46.5	65.7	±1.05	102	19.5	54.9	±1.78 ⁵	60	46.5	56.0	±1.76
Some post grad, no degree	19	14.7	63.5	±1.80	76	14.5	49.3	±2.01 ^{1,3,4}	19	14.7	55.1	±3.29
Doctoral Degree	2	1.6	57.5	±5.56	4	0.8	60.5	±8.54	2	1.6	68.0	±9.29

^aTFS is a summed subscore from individual transformational leadership characteristic scales. Possible scores range from 0-80.

Superscripts 1-6 indicate significantly different TFS Scores in columns based on demographic characteristics, GLM $p \leq .05$.

Although some studies (5) have shown that female managers tend to score higher in transformational leadership characteristics than do male managers, there were no differences in this study based on gender. This included both self-rated TFS and employee-rated TFS. The same was true for age. There were no significant differences in self-rated TFS or employee-rated TFS in our sample based on age of manager. Neither did age of subordinate influence ratings of manager TFS (**Table 3**).

The education level of managers showed no significant difference in relation to TFS as rated by self or subordinate. However, employees who had received some post-graduation education but no advanced degree rated the TFS of their managers significantly lower (49.3) than did employees who had received a high-school diploma (56.7), a Bachelor's Degree (54.4), or a Master's Degree (54.9) (**Table 3**).

Transformational Leadership Scores and Job Related Questions

Table 4 show TFS and job related questions. Differences between type of manager and type of employee were reported using GLM. Directors of Food and Nutrition Services (DFNS) rated themselves significantly higher (66.0) in TFS than did Clinical Nutrition Managers (CNM) (62.1). Employees who reported directly to a DFNS rated their director higher (58.6) than did employees who reported directly to a CNM (51.2). This was significant at the $p < .0001$ level. There were no significant differences in TFS between managers who worked in a small hospital versus a large hospital. There were no significant differences in either self-rated or employee-rated TFS between managers who were hired from within the organization and those who were hired from outside the organization.

Table 4. Summed Transformational Leadership Scores (TFS)^a by Job Factors

	Manager-Rated Job Factors by Self-Rated TFS			Employee-Rated Job Factors by Employee-Rated TFS			Manager-Rated Job Factors by Employee-Rated TFS		
	n	%	TFS LS Mean ± SE	n	%	TFS LS Mean ± SE	n	%	TFS LS Mean ± SE
Manager Type:									
Director of Food and Nutrition Services	66	51.2	66.0 ±0.96 ²				66	51.2	57.3 ±1.66 ²
Clinical Nutrition Manager	63	48.8	62.1 ±0.98 ¹				63	48.8	51.6 ±1.65 ¹
Employee Type:									
Foodservice/Supervisor				198	37.7	58.6 ±1.26 ²			
Clinical Nutrition				332	62.6	51.2 ±0.98 ¹			
Hospital Size:									
Small ≤ 350 beds	63	50.8	63.7 ±1.00				63	50.8	52.7 ±1.75
Large > 350 beds	61	49.2	64.3 ±1.02				61	49.2	55.6 ±1.77
Hired In or Out:									
From within organization	63	51.2	63.3 ±1.02				63	51.2	52.8 ±1.77
From outside organization	66	48.8	64.8 ±0.98				66	48.8	55.8 ±1.67
Manager's Time in all Management Positions:									
Less than 1 year	3	2.3	66.3 ±4.48				3	2.3	53.3 ±7.55
1 to 5 years	26	20.3	61.1 ±1.52 ⁵				26	20.3	54.4 ±2.73
6 to 10 years	14	10.9	61.8 ±2.15				14	10.9	59.5 ±3.63 ⁴
11 to 20 years	37	28.9	64.8 ±1.29				37	28.9	50.2 ±2.21 ^{3,5}
Greater than 20 years	48	37.5	66.0 ±1.14 ²				48	37.5	56.6 ±1.97 ⁴
Employee's Time with Current Manager:									
Less than 1 year				99	19.0	53.2 ±1.80			
1 to 5 years				294	56.2	54.2 ±1.06			
6 to 10 years				69	13.2	54.6 ±2.20			
11 to 20 years				45	8.65	53.1 ±2.69			
Greater than 20 years				16	3.1	55.7 ±4.44			

Table 4. Summed Transformational Leadership Scores (TFS)^a by Job Factors Continued

	Manager-Rated Job Factors by Self-Rated TFS				Employee-Rated Job Factors by Employee-Rated TFS				Manager-Rated Job Factors by Employee-Rated TFS			
	n	%	TFS LS Mean ± SE		n	%	TFS LS Mean ± SE		n	%	TFS LS Mean ± SE	
Enjoy Job:												
Strongly Disagree	0	0.0	0.0	0.00	1	0.2	79.0	15.19 ^{2,3,4,5,6}	0	0.0	0.0	0.00
Disagree	0	0.0	0.0	0.00	3	0.6	36.0	10.74 ^{1,7}	0	0.0	0.0	0.00
Somewhat Disagree	1	0.8	60.0	7.24	17	3.2	38.1	3.92 ^{1,6,7}	1	0.8	44.0	13.13
Neither Agree or Disagree	0	0.0	0.0	0.00	13	2.5	36.5	4.38 ^{1,6,7}	0	0.0	0.0	0.00
Somewhat Agree	11	8.5	54.5	2.29 ^{6,7}	80	15.3	42.0	1.83 ^{1,6,7}	11	8.5	46.1	3.96 ⁷
Agree	45	34.9	62.9	1.09 ^{5,7}	237	45.2	53.6	1.05 ^{3,4,5,7}	45	34.9	54.7	2.00
Strongly Agree	72	55.8	66.3	0.87 ^{5,6}	173	33.0	62.8	1.19 ^{2,3,4,5,6}	72	55.8	55.7	1.64 ⁵
Employee Plans to Change Jobs:												
Strongly Disagree					99	18.9	63.7	1.70 ^{2,4,5,6,7}				
Disagree					131	25.0	56.4	1.51 ^{2,4,5,6,7}				
Somewhat Disagree					25	4.8	56.5	3.30 ^{6,7}				
Neither Agree or Disagree					105	20.0	51.8	1.69 ^{1,2,6}				
Somewhat Agree					79	15.1	49.8	1.87 ^{1,2,6}				
Agree					37	7.1	42.6	2.95 ^{1,2,3,4,5}				
Strongly Agree					48	9.2	47.1	2.41 ^{1,2,3}				

^aTFS is a summed subscore from individual transformational leadership characteristic scales. Possible scores range from 0-80.

Superscripts 1-7 indicate significantly different TFS Scores in columns based on job factors, GLM p≤.05.

Based on amount of time spent in all management positions, only those who had been in management positions for more than 20 years rated themselves significantly higher (66.0) in TFS than those who had been in management for one to five years (61.1). Employees of those who had been in management either from 6 to 10 years (59.5) or more than 20 years (56.6) rated their managers higher in TFS than employees of those who had been in management positions from 11-20 years (50.2). There were no significant differences in TFS as rated by employees based on the amount of time they had worked under their current manager.

Even though most managers (99.2%) agreed to some degree that they enjoy their current role as manager, those who *somewhat agreed* rated themselves significantly lower in TFS (54.5) than did those who *agreed* (62.9) and those who *strongly agreed* (66.3). The difference in self-rated TFS between those who *agreed* that they enjoy their current role as manager versus those who *strongly agreed* was also significant. Those managers who *strongly agreed* that they enjoy their current role as manager were also rated higher (55.7) by their employees than were those managers who said they *somewhat agreed* that they enjoy their current role (46.1). Employees who *strongly agreed* to enjoying their current job also rated their managers significantly higher than did employees in most other response categories. Also, those employees who *strongly disagreed* that they were planning a job change in the near future rated their managers significantly higher in TFS than any other group.

Transformational Leadership Scores and Religiosity/Spirituality Scores

There were no significant differences in manager-rated TFS compared by manager's Religiosity (**Table 5**) or Spirituality Scores of managers (**Table 6**). There were also no significant differences in employee-rated TFS compared with Religiosity (**Table 5**) and Spirituality Scores of either employees or managers (**Table 6**). However, there were some differences noted in specific transformational leadership scales and Religiosity Scores, noted on **Table 5**.

Transformational Leadership Scores (TFS), Spiritual Influence (SIS) and Actions (SAS), and Trust (MTS and ETS)

Table 7 shows there were no significant correlations between TFS (as rated by managers or employees) and SIS rated by managers or employees. There were also no significant correlations between manager and employee ratings of TFS by SAS.

There was a strong positive correlation ($p < .0001$) between manager-rated TFS and manager's ratings of MTS, which is a measure of the degree to which the managers believe their employee's trust them (Section C: "In general, my employees view me as..."). There was a positive correlation ($p = .02$) between the manager-rated TFS and manager's rating of ETS, which is a measure of the degree to which the managers trust their employees (Section D: "In general, my employee's are...").

Table 5. Manager and Employee-Rated Individual Transformational Leadership Scales^a and Summed Transformational Leadership Scores (TFS)^b by Religiosity Scores^c

Manager Responses	0 (n=38)		1 (n=13)		Manager Religiosity Score 2 (n=13) LS Mean ± SE		3 (n=13)		4 (n=52)	
	Individual Consideration (IC)	13.8	±0.29	13.0	±0.49	13.2	±0.49	13.8	±0.49	13.3
Inspirational Motivation (IM)	13.6	±0.37	13.5	±0.62	12.5	±0.62	13.2	±0.62	12.9	±0.31
Intellectual Stimulation (IS)	13.5	±0.30 ⁴	12.5	±0.50	12.7	±0.50	13.3	±0.50	12.6	±0.25 ⁰
Idealized Influence, Behavior (IIB)	11.6	±0.36 ³	11.2	±0.61 ³	11.4	±0.61 ³	13.4	±0.61 ^{0,1,2}	12.4	±0.31
Idealized Influence, Attributed (IIA)	13.0	±0.31 ²	11.8	±0.53	11.5	±0.53 ⁰	12.4	±0.53	12.2	±0.27
Transformational Leadership Score (TFS)	65.8	1.33	62.0	2.19	61.4	2.19	66.2	2.19	63.6	1.13

Employee Responses	0 (n=38)		1 (n=13)		Manager Religiosity Score 2 (n=13) LS Mean ± SE		3 (n=13)		4 (n=52)	
	Individual Consideration (IC)	10.0	±0.29	11.0	±0.52	10.2	±0.48	10.1	±0.54	10.8
Inspirational Motivation (IM)	11.9	±0.29 ³	12.4	±0.51 ³	11.6	±0.47	10.3	±0.53 ^{0,1,4}	11.9	±0.27 ³
Intellectual Stimulation (IS)	10.4	±0.28	10.7	±0.50	10.4	±0.46	10.4	±0.55	10.5	±0.27
Idealized Influence, Behavior (IIB)	9.5	±0.30	10.1	±0.52	10.2	±0.49	9.5	±0.56	10.1	±0.28
Idealized Influence, Attributed (IIA)	11.2	±0.31	11.8	±0.52 ³	11.3	±0.50	10.2	±0.56 ^{1,4}	11.5	±0.28 ³
Transformational Leadership Score (TFS)	54.2	±2.29	52.7	±3.85	48.6	±4.02	53.9	±3.85	56.3	±1.89

Employee Responses	0 (n=162)		1 (n=55)		Employee Religiosity Score 2 (n=61) LS Mean ± SE		3 (n=50)		4 (n=187)	
	Individual Consideration (IC)	10.0	0.29	11.0	0.52	10.2	0.48	10.1	0.54	10.8
Inspirational Motivation (IM)	11.9	0.29 ³	12.4	0.51 ³	11.6	0.47	10.3	0.53 ^{0,1,4}	11.9	0.27 ³
Intellectual Stimulation (IS)	10.4	0.28	10.7	0.50	10.4	0.46	10.4	0.55	10.5	0.27
Idealized Influence, Behavior (IIB)	9.5	0.30	10.1	0.52	10.2	0.49	9.5	0.56	10.1	0.28
Idealized Influence, Attributed (IIA)	11.2	0.31	11.8	0.52 ³	11.3	0.50	10.2	0.56 ^{1,4}	11.5	0.28 ³
Transformational Leadership Score (TFS)	53.3	1.53	56.0	2.65	53.4	2.42	51.8	2.71	54.7	1.31

^a The scales in this table come from questions the MLQ Form 5X-Short, which were combined into the individual Transformational Leadership Scales (i.e. IIA, IIB, IM, IS, IC). Possible scores range from 0-16.

^b TFS is a summed subscore from individual transformational leadership characteristic scales. Possible scores range from 0-80.

^c The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different Transformational Leadership Scales and TFS Scores in rows based on Religiosity Scores, GLM p≤.05.

Table 6. Manager and Employee-Rated Individual Transformational Leadership Scales^a and Summed Transformational Leadership Scores (TFS)^b by Spirituality Scores^c

Manager Responses	Manager Spirituality Score					
	Low (n=16)		Medium (n=30)		High (n=81)	
			LS Mean ± SE			
Individual Consideration (IC)	14.0	±0.45	13.2	±0.33	13.5	±0.20
Inspirational Motivation (IM)	13.5	±0.58	13.3	±0.41	13.1	±0.25
Intellectual Stimulation (IS)	13.2	±0.47	12.9	±0.34	12.8	±0.21
Idealized Influence, Behavior (IIB)	11.8	±0.56	11.6	±0.41	12.3	±0.25
Idealized Influence, Attributed (IIA)	12.5	±0.48	12.7	±0.35	12.2	±0.22
Transformational Leadership Score (TFS)	65.5	2.06	63.9	1.48	63.9	0.90
Employee Responses	Manager Spirituality Score					
	Low (n=16)		Medium (n=30)		High (n=81)	
			LS Mean ± SE			
Individual Consideration (IC)	9.8	±0.55	10.7	±0.40	10.4	±0.20
Inspirational Motivation (IM)	11.6	±0.55	11.9	±0.41	11.7	±0.21
Intellectual Stimulation (IS)	10.2	±0.54	10.6	±0.40	10.4	±0.20
Idealized Influence, Behavior (IIB)	9.0	±0.55	9.5	±0.40	10.0	±0.20
Idealized Influence, Attributed (IIA)	10.9	±0.57	11.5	±0.42	11.3	±0.21
Transformational Leadership Score (TFS)	52.7	±3.42	58.2	±2.65	53.5	1.51
Employee Responses	Employee Spirituality Score					
	Low (n=47)		Medium (n=86)		High (n=341)	
			LS Mean ± SE			
Individual Consideration (IC)	9.8	0.55	10.7	0.40	10.4	0.20
Inspirational Motivation (IM)	11.6	0.55	11.9	0.41	11.7	0.21
Intellectual Stimulation (IS)	10.2	0.54	10.6	0.40	10.4	0.20
Idealized Influence, Behavior (IIB)	9.0	0.55	9.5	0.40	10.0	0.20
Idealized Influence, Attributed (IIA)	10.9	0.57	11.5	0.42	11.3	0.21
Transformational Leadership Score (TFS)	52.7	2.71	54.8	1.94	54.0	0.97

^a The scales in this table come from questions the MLQ Form 5X-Short, which were combined into the individual Transformational Leadership Scales in which they belong (i.e. IIA, IIB, IM, IS, IC). Possible scores range from 0-16.

^b TFS is a summed subscore from individual transformational leadership characteristic scales. Possible scores range from 0-80.

^c The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response in question #71 (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation in question #72 (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 1-3 indicate significantly different Transformational Leadership Scales and TFS Scores in rows based on Spirituality Scores, GLM $p < .05$.

Table 7. Pearson's Correlation, Transformational Leadership Score (TFS)^a by Spiritual Influence Score (SIS)^b, Spiritual Action Score (SAS)^c, Manager Trust Score (MTS)^d, and Employee Trust Score (ETS)^e

		Manager-Rated			
		SIS	SAS	MTS	ETS
Manager-Rated TFS	r =	0.0256	0.0582	0.4184	0.2030
	p =	0.7798	0.5205	<.0001	0.0231
		Employee-Rated			
		SIS	SAS	MTS	ETS
Employee-Rated TFS	r =	0.0325	0.0200	0.6934	0.4248
	p =	0.4911	0.6655	<.0001	<.0001
		Manager-Rated			
		SIS	SAS	MTS	ETS
Employee-Rated TFS	r =	-0.1265	-0.0713	0.3821	0.1755
	p =	0.1760	0.4427	<.0001	0.0563

^a TFS is a summed subscore from individual transformational leadership characteristic scales. Possible scores range from 0-80.

^b SIS is obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range from 11 to 77.

^c SAS is obtained by summing the answers to questions 12 through 15 which comprise Section B of the survey instrument. Possible scores range from 4 to 28.

^d MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 4 to 28. On the manager survey it denotes how the manager thinks their employees view them on matters of trust. On the employee survey it denotes how the employees actually view their manager on matters of trust.

^e ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 4 to 42. On the manager survey it denotes how the managers actually view their employees on matters of trust. On the employee survey it denotes how the employees think their manager views them on matters of trust.

There were also strong positive correlations (both $p < .0001$) between employee-rated TFS and employee-rated MTS (Section C: “In general, my director/manager is...”) and employee-rated ETS (Section D: “In general, my director/manager views me as...”).

There was also a strong positive correlation between employee-rated TFS and employee-rated MTS and ETS (both $p < .0001$). There was a strong positive correlation between employee-rated TFS and manager-rated MTS ($p < .0001$), assessing how the managers think their employees view them relating to trust. There was no apparent correlation seen with employee-rated TFS and manager-rated ETS, assessing how managers view their employees (**Table 7**).

Religiosity/Spirituality Scores

The Religiosity Score is a validated measure of religiosity, which takes into account attendance at worship services in the previous month. It is obtained from question #69 on the survey instrument which asks, “In the past month, how many times have you attended worship services?” Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

The Spirituality Score was obtained by combining answers to question #71 (My religious/spiritual beliefs influence my daily life...) with responses being given a numeric value from 0 to 6, with answers to question #72 (How often do you pray or meditate?) with responses given a numeric value from 0 to 5. By summing responses to these two questions, a spirituality score ranging from 0 to 11 was possible. These summed scores were further grouped into categories of Low (summed scores from 0-5), Medium (summed scores from 6-8), and High Spirituality (summed scores from 9-11).

Although significance was not determined, the frequency tables show the same trend for managers and employees when comparing Religiosity Scores with Spirituality Scores. When Religiosity Scores increased, Spirituality Scores also increased. There were 37.8% of managers and 36.7% of employees who had a Religiosity Score of 4 coupled with a High Spirituality Score (**Table 8**).

Table 8. Frequency of Religiosity Scores^a by Spirituality Scores^b

			Religiosity Scores					Total Spirituality Scores
			0	1	2	3	4	
Spirituality Scores	Low	n= %= 13 10.24	3 2.36	0 0.00	0 0.00	0 0.00	16 12.60	
	Medium	n= %= 12 9.45	5 3.94	5 3.94	4 3.15	4 3.15	30 23.62	
	High	n= %= 11 8.66	5 3.94	8 6.30	9 7.09	48 37.8	81 63.78	
Total Manager Religiosity Scores		n= %= 36 28.35	13 10.24	13 10.24	13 10.24	52 40.94	127 100.00	
Spirituality Scores	Low	n= %= 37 7.94	2 0.43	4 0.86	2 0.43	1 0.21	46 9.87	
	Medium	n= %= 35 7.51	20 4.29	8 1.72	8 1.72	13 2.79	84 18.03	
	High	n= %= 62 13.30	22 4.72	43 9.23	38 8.15	171 36.70	336 72.10	
Total Employee Religiosity Scores		n= %= 36 28.35	134 28.76	44 9.44	55 11.80	48 10.30	185 39.70	

^a The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

^b The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Religiosity/Spirituality Scores and Demographics

Table 9 shows Religiosity and Spirituality Scores by respondents' demographic characteristics. Among managers, Asian and Pacific Islanders had significantly higher Religiosity Scores (3.7) than did Native Americans (0.5), though there were no significant differences among manager's Spirituality Scores. Among employees, Asian

and Pacific Islanders had significantly higher Religiosity Scores (2.6) than did Hispanics (1.6), and African Americans had significantly higher Spirituality Scores (10.2) than did Caucasians (8.9).

There were no significant differences between male and female managers in either Religiosity or Spirituality Scores in this study. Female employees, however, had higher Religiosity Scores (2.2) than did male employees (1.3), but showed no significant differences from male employees in Spirituality Scores. The only significant difference by age in managers was that managers in the 41-50 years category had higher Religiosity and Spirituality Scores (2.7 and 9.3) than did managers in the 31-40 years category (1.4 and 7.5). There were no differences by age in Religiosity Scores for employees, although older employees tended to have higher Spirituality Scores than younger employees.

The education level of managers showed that those who had a doctoral degree had lower Religiosity Scores (0.0) than did those managers with an associate's degree (3.6). Managers with a master's degree had lower Spirituality Scores (8.1) than did managers with an associate's degree (10.6). There were no differences in Religiosity Scores among employees based on education level, although those employees with a high school diploma had significantly higher Spirituality Scores than almost all other education levels.

Table 9. Demographics by Manager and Employee Religiosity^a and Spirituality^b Scores

	Manager Demographics by Manager-Rated Religiosity and Spirituality					Employee Demographics by Employee-Rated Religiosity and Spirituality						
	n	%	Religiosity LS Mean ± SE		Spirituality LS Mean ± SE		n	%	Religiosity LS Mean ± SE		Spirituality LS Mean ± SE	
Ethnic Group:												
African American	2	1.6	2.0	1.22	9.0	1.89	42	8.1	2.4	0.27	10.2	0.40 ³
Asian & Pacific Islander	3	2.3	3.7	0.99 ⁵	11.0	1.54	29	5.6	2.6	0.32 ⁴	9.4	0.46
Caucasian	120	93.0	2.2	0.16	8.5	0.24	419	80.9	2.1	0.08	8.9	0.12 ¹
Hispanic	2	1.6	2.5	1.22	10.0	1.89	18	3.5	1.6	0.40 ²	9.1	0.61
Native American	2	1.6	0.5	1.22 ²	10.0	1.89	6	1.2	1.2	0.69	8.8	1.09
Other	0	0	0.0	0.00	0.0	0.00	4	0.8	2.0	0.85	8.3	1.22
Gender:												
Female	107	83.0	2.1	0.17	8.6	0.26	473	90.4	2.2	0.08 ²	9.1	0.12
Male	22	17.0	2.6	0.37	8.3	0.57	50	9.5	1.3	0.24 ¹	8.4	0.38
Age:												
18-20	0	0.0	0.0	0.00	0.0	0.00	0	0.0	0.0	0.00	0.0	0.00
21-30	9	7.0	2.0	0.55	9.2	0.85	53	29.3	1.9	0.14	8.6	0.21 ^{4,5}
31-40	28	21.9	1.4	0.31 ⁴	7.5	0.48 ⁴	147	28.1	2.0	0.14	8.8	0.21 ⁴
41-50	57	44.5	2.7	0.22 ³	9.3	0.34 ³	136	26.0	2.3	0.15	9.5	0.22 ^{2,3}
51-60	33	25.8	2.2	0.29	8.3	0.44	73	14.0	2.2	0.20	9.5	0.30 ²
≥ 60	1	0.8	0.0	1.66	10.0	2.55	14	2.7	2.6	0.46	9.5	0.65
Education:												
High School Diploma/GED	1	0.8	4.0	1.70	11.0	2.65	71	13.6	2.1	0.12	10.0	0.17 ^{2,3,4,5}
Associate Degree	5	3.9	3.6	0.76 ⁶	10.6	1.12 ⁴	51	9.7	1.7	0.24	8.7	0.35 ¹
Bachelor's Degree	42	32.6	2.4	0.26	9.0	9.02	220	42.0	2.2	0.12	8.9	0.17 ¹
Master's Degree	60	46.5	2.1	0.22	8.1	8.12 ²	102	19.5	2.2	0.17	9.0	0.25 ¹
Some post grad, no degree	19	14.7	2.1	0.39	8.3	0.61	76	14.5	1.9	0.20	8.8	0.29 ¹
Doctoral Degree	2	1.6	0.0	1.20 ²	8.5	1.87	4	0.8	2.8	0.85	11.0	0.21

^a The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

^b The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 1-6 indicate significantly different Religiosity and Spirituality Scores in columns based on demographic characteristics, GLM $p \leq 0.05$.

Religiosity/Spirituality Scores and Job Related Questions

In a Chi-Square test of manager-rated religiosity and spirituality by manager-rated job enjoyment, the factors were not significantly related. Of interest, however, is that 40.3% of managers agreed to some degree that they enjoy their current position and had a Religiosity Score of 4, and 63.8% of managers who agreed to some degree that they enjoy their current position had a High Spirituality Score. There were also no significant relationships between employee job enjoyment and manager Religiosity and Spirituality Scores based on the Chi-Square test.

Using GLM, no significant differences were found between employee's intentions to change jobs in the near future based on their Religiosity and Spirituality Scores. There was also not a significant relationship between employee's intentions to change jobs in the near future and manager Religiosity and Spirituality Scores based on the Chi-Square test.

Religiosity/Spirituality Scores and Spiritual Influence (SIS) and Actions (SAS)

The Spiritual Influence Score (SIS) was obtained by summing each respondent's answers on Section A. There were 11 questions in this section, with scores ranging from 1 to 7, so the summed SIS could range from 11 to 77. The Spiritual Action Score (SAS) was obtained in a similar manner from answers to questions in Section B. Since there were four questions in this section, with scores ranging from 1 to 7, the SAS could range from 4 to 28.

In comparing manager's Religiosity (**Table 10**) and Spirituality Scores (**Table 11**) to SIS using GLM, there was a linear trend showing that managers who had higher

Religiosity and Spirituality Scores also had a higher SIS. Most of the differences between managers with different Religiosity Scores and Spirituality Scores were significant. For example, managers with a Religiosity Score of 4 had a summed SIS of 63.6, while managers with a Religiosity Score of 0 had a summed SIS of 43.9 (**Table 10**).

The same was true for employees and their Religiosity (**Table 10**) and Spirituality (**Table 11**) Scores, although for employees with a Religiosity Score of 2 or 3, the SIS was virtually the same. Comparing manager and employee Religiosity (**Table 12**) and Spirituality (**Table 13**) Scores with SAS scores yielded similar results, with those managers and employees having higher Religiosity and Spirituality Scores also having higher SAS scores.

Religiosity/Spirituality Scores and Trust (MTS and ETS)

The GLM showed few significant differences in MTS, assessing how managers view their employees in issues of trust based on Religiosity Scores of managers. However, managers with a Religiosity Score of 2 had a lower MTS than did managers who had a Religiosity Score of 0 or 4 (**Table 14**).

Table 10. Manager and Employee Spiritual Influence Scores (SIS)^a by Religiosity Scores^b

Manager Responses	Manager Religiosity Score														
	0 (n=38)			1 (n=13)			2 (n=13)			3 (n=13)		4 (n=52)			
							LS Mean ± SE								
My religious beliefs/spirituality...															
help me deal with stressful situations.	4.6	±0.23	2,3,4	5.0	±0.39	3,4	5.7	±0.39	0	6.0	±0.39	0	6.3	±0.19	0,1
guide my interactions with coworkers.	4.3	±0.22	2,3,4	5.0	±0.36	4	5.4	±0.36	0	5.9	±0.36	0	6.2	±0.18	0,1
drive my work ethic.	4.6	±0.23	3,4	5.0	±0.39	4	5.5	±0.39		5.8	±0.39	0	6.1	±0.20	0,1
supply me with wisdom/insight in adapting to conditions in the workplace.	4.1	±0.23	2,3,4	4.6	±0.39	4	5.2	±0.39	0,4	5.0	±0.39	4	6.1	±0.20	0,1,2,3
guide decisions I make at work.	4.3	±0.22	2,3,4	4.3	±0.37	2,3,4	5.4	±0.37	0,1	5.4	±0.37	0,1	6.0	±0.18	0,1
influence how I establish and follow company policies and procedures.	3.9	±0.24	1,2,3,4	4.9	±0.40	0,4	5.3	±0.40	0	5.3	±0.40	0	5.9	±0.19	0,1
are critical in helping me get through the workday.	3.9	±0.26	4	4.2	±0.44	4	4.8	±0.44	4	4.9	±0.44		5.9	±0.22	0,1,2
influence my commitment to my job and to my coworkers.	4.2	±0.22	1,2,3,4	5.2	±0.38	0	5.4	±0.38	0	5.9	±0.38	0	5.8	±0.19	0
influence my individual goals as a manager.	3.9	±0.23	1,2,3,4	5.1	±0.38	0	5.2	±0.38	0	5.4	±0.38	0	5.8	±0.19	0
are apparent to those with whom I work.	3.5	±0.22	2,3,4	4.0	±0.37	3,4	4.7	±0.37	0	5.2	±0.37	0,1	5.4	±0.18	0,1
are a normal part of my discussions with coworkers.	2.8	±0.29	3,4	2.8	±0.50	3,4	2.9	±0.52	4	4.2	±0.50	0,1	4.1	±0.25	0,1,2
Spiritual Influence Score (SIS)	43.9	±2.14	2,3,4	50.0	±3.57	4	54.7	±3.71	0,4	59.2	±3.56	0	63.6	±1.78	0,1,2

Table 10. Manager and Employee Spiritual Influence Scores (SIS)^a by Religiosity Scores^b Continued

Employee Responses	Employee Religiosity Score														
	0 (n=162)		1 (n=55)		2 (n=61) LS Mean ± SE		3 (n=50)		4 (n=187)						
My religious beliefs/spirituality...															
help me deal with stressful situations.	4.9	±0.11	1,2,3,4	5.5	±0.18	0,3,4	5.8	±0.17	0,4	6.0	±0.19	0,1	6.3	±0.10	0,1,2
guide my interactions with coworkers.	4.4	±0.11	1,2,3,4	4.93	±0.18	0,2,3,4	5.6	±0.17	0,1,4	5.6	±0.19	0,1,4	6.1	±0.10	0,1,2,3
drive my work ethic.	4.6	±0.11	1,2,3,4	5.1	±0.19	0,2,3,4	5.7	±0.17	0,1,4	5.7	±0.20	0,1,4	6.2	±0.10	0,1,2,3
supply me with wisdom/insight in adapting to conditions in the workplace.	4.2	±0.11	1,2,3,4	4.9	±0.19	0,3,4	5.4	±0.19	0,4	5.5	±0.21	0,1	5.9	±0.11	0,1,2
guide decisions I make at work.	4.3	±0.11	1,2,3,4	4.9	±0.18	0,2,4	5.5	±0.18	0,1,4	5.4	±0.20	0,4	6.0	±0.10	0,1,2,3
influence how I establish and follow company policies and procedures.	4.4	±0.11	2,3,4	4.8	±0.20	2,4	5.7	±0.19	0,1	5.3	±0.21	0,4	6.0	±0.11	0,1,3
are critical in helping me get through the workday.	4.1	±0.12	1,2,3,4	4.8	±0.2	0,3,4	5.2	±0.20	0,4	5.4	±0.23	0,1,4	5.9	±0.11	0,1,2,3
influence my commitment to my job and to my coworkers.	4.5	±0.11	2,3,4	4.8	±0.18	2,3,4	5.6	±0.17	0,1,4	5.6	±0.19	0,1	6.0	±0.10	0,1,2
influence my individual goals as a manager.	4.4	±0.11	1,2,3,4	5.0	±0.19	0,2,4	5.6	±0.18	0,1	5.2	±0.20	0,4	6.0	±0.10	0,1,3
are apparent to those with whom I work.	3.8	±0.11	1,2,3,4	4.5	±0.18	0,4	4.8	±0.17	0,4	4.9	±0.19	0,4	5.5	±0.10	0,1,2,3
are a normal part of my discussions with coworkers.	2.8	±0.12	1,2,3,4	3.5	±0.21	0,3,4	4.1	±0.20	0	4.1	±0.23	0,1	4.5	±0.12	0,1
Spiritual Influence Score (SIS)	46.1	±1.03	1,2,3,4	52.8	±1.76	0,2,3,4	58.7	±1.67	0,1,4	58.5	±1.9	0,1,4	64.7	±0.95	0,1,2,3

^a SIS is obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 11-77 for the summed SIS.

^b The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different SIS Scores in rows based on Religiosity Scores, GLM $p \leq .05$.

Table 11. Manager and Employee Spiritual Influence Scores (SIS)^a by Spirituality Scores^b

Manager Responses	Spirituality Score		
	Low (n=16)	Medium (n=30)	High (n=81)
	LS Mean ± SE		
My religious beliefs/spirituality...			
guide my interactions with coworkers.	3.4 ±0.28 ^{2,3}	4.6 ±0.20 ^{1,3}	6.2 ±0.12 ^{1,2}
help me deal with stressful situations.	3.2 ±0.29 ^{2,3}	5.1 ±0.21 ^{1,3}	6.2 ±0.13 ^{1,2}
drive my work ethic.	3.4 ±0.31 ^{2,3}	4.9 ±0.22 ^{1,3}	6.1 ±0.14 ^{1,2}
supply me with wisdom/insight in adapting to conditions in the workplace.	3.2 ±0.30 ^{2,3}	4.3 ±0.22 ^{1,3}	6.0 ±0.14 ^{1,2}
guide decisions I make at work.	3.4 ±0.30 ^{2,3}	4.5 ±0.22 ^{1,3}	5.9 ±0.13 ^{1,2}
influence my commitment to my job and to my coworkers.	3.3 ±0.30 ^{2,3}	4.8 ±0.22 ^{1,3}	5.9 ±0.13 ^{1,2}
influence how I establish and follow company P&P.	3.3 ±0.33 ^{2,3}	4.4 ±0.24 ^{1,3}	5.8 ±0.14 ^{1,2}
influence my individual goals as a manager.	3.3 ±0.31 ^{2,3}	4.3 ±0.23 ^{1,3}	5.8 ±0.14 ^{1,2}
are critical in helping me get through the workday.	2.4 ±0.35 ^{2,3}	4.4 ±0.25 ^{1,3}	5.7 ±0.15 ^{1,2}
are apparent to those with whom I work.	2.7 ±0.30 ^{2,3}	4.0 ±0.22 ^{1,3}	5.3 ±0.13 ^{1,2}
are a normal part of my discussions with coworkers.	1.8 ±0.41 ³	2.7 ±0.30 ³	4.2 ±0.18 ^{1,2}
Spiritual Influence Score (SIS)	33.3 ±2.62 ^{2,3}	48.0 ±1.91 ^{1,3}	62.3 ±1.18 ^{1,2}
Employee Responses	Low (n=47)	Medium (n=86)	High (n=341)
My religious beliefs/spirituality...			
guide my interactions with coworkers.	2.9 0.16 ^{2,3}	4.7 0.12 ^{1,3}	6.0 0.06 ^{1,2}
help me deal with stressful situations.	3.1 0.15 ^{2,3}	5.2 0.11 ^{1,3}	6.4 0.05 ^{1,2}
drive my work ethic.	3.2 0.16 ^{2,3}	4.9 0.12 ^{1,3}	6.1 0.06 ^{1,2}
supply me with wisdom/insight in adapting to conditions in the workplace.	2.9 0.18 ^{2,3}	4.5 0.13 ^{1,3}	5.8 0.07 ^{1,2}
guide decisions I make at work.	2.9 0.16 ^{2,3}	4.5 0.12 ^{1,3}	5.9 0.06 ^{1,2}
influence my commitment to my job and to my coworkers.	3.1 0.16 ^{2,3}	4.7 0.12 ^{1,3}	5.9 0.06 ^{1,2}
influence how I establish and follow company P&P.	2.9 0.18 ^{2,3}	4.5 0.13 ^{1,3}	5.9 0.07 ^{1,2}
influence my individual goals as a manager.	2.9 0.17 ^{2,3}	4.6 0.12 ^{1,3}	5.9 0.06 ^{1,2}
are critical in helping me get through the workday.	2.6 0.19 ^{2,3}	4.1 0.14 ^{1,3}	5.8 0.07 ^{1,2}
are apparent to those with whom I work.	2.7 0.18 ^{2,3}	4.0 0.13 ^{1,3}	5.3 0.07 ^{1,2}
are a normal part of my discussions with coworkers.	2.3 0.23 ^{2,3}	3.0 0.17 ^{1,3}	4.3 0.08 ^{1,2}
Spiritual Influence Score (SIS)	31.6 1.43 ^{2,3}	49.0 1.07 ^{1,3}	63.5 0.55 ^{1,2}

^a SIS is obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 11-77 for the summed SIS.

^b The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 0-4 indicate significantly different SIS Scores in rows based on Spirituality Scores, GLM $p \leq .05$.

Table 12: Manager and Employee Spiritual Actions Scores (SAS)^a by Religiosity^b

Manager Responses	0 (n=38)			(n=13)			Manager Religiosity Score 2 (n=13)			3 (n=13)			4 (n=52)		
	LS Mean ± SE														
I often...															
follow God's (a Supreme Being's) example in my interactions at work.	3.8	0.23	2,3,4	4.2	0.39	4	4.9	0.39	0,4	5.2	0.39	0	5.9	0.20	0,1,2
have spiritual/religious feelings at work.	3.2	0.26	2,3,4	3.7	0.44	4	4.4	0.44	0,4	4.8	0.44	0	5.7	0.22	0,1,2
rely on spiritual insight in making decisions at work.	3.4	0.26	2,3,4	3.8	0.44	4	4.5	0.44	0,4	4.8	0.44	0	5.5	0.22	0,1,2
pray about work-related issues.	3.0	0.29	2,3,4	3.5	0.49	4	4.3	0.49	0	4.5	0.49	0	5.3	0.24	0,1
Spiritual Action Score (SAS)	13.8	0.93	2,3,4	15.2	1.57	4	18.1	1.57	0,4	19.4	1.57	0	22.5	0.79	0,1,2
Employee Responses	0 (n=162)			1 (n=55)			Employee Religiosity Score 2 (n=61)			3 (n=50)			4 (n=187)		
	LS Mean ± SE														
I often...															
follow God's (a Supreme Being's) example in my interactions at work.	4.1	0.12	1,2,3,4	4.7	0.20	0,4	5.2	0.19	0,4	5.2	0.21	0,4	5.8	0.11	0,1,2,3
have spiritual/religious feelings at work.	3.7	0.12	1,2,3,4	4.3	0.21	0,3,4	4.8	0.20	0,4	5.1	0.22	0,1	5.5	0.11	0,1,2
rely on spiritual insight in making decisions at work.	3.7	0.12	1,2,3,4	4.2	0.21	0,2,3,4	4.9	0.20	0,1,4	4.9	0.22	0,1,4	5.4	0.11	0,1,2,3
pray about work-related issues.	3.4	0.13	1,2,3,4	4.1	0.23	0,3,4	4.7	0.22	0,4	4.8	0.24	0,1,4	5.5	0.12	0,1,2,3
Spiritual Action Score (SAS)	15.0	0.44	1,2,3,4	17.4	0.76	0,2,3,4	19.6	0.72	0,1,4	20.1	0.80	0,1,4	22.3	0.41	0,1,2,3

^a SAS is obtained by summing the answers to questions 12 through 15 which comprise Section B of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4 to 28 for the summed SAS.

^b The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different SAS Scores in rows based on Religiosity Scores, GLM $p \leq 0.05$.

Table 13: Manager and Employee Spiritual Actions Scores (SAS)^a and Spirituality Scores^b

Manager Responses	Manager Spirituality Score								
	Low (n=16)			Medium (n=30)			High (n=81)		
	LS Mean ± SE								
I often...									
follow God's (a Supreme Being's) example in my interactions at work.	2.5	0.30	^{2,3}	4.3	0.22	^{1,3}	5.7	0.14	^{1,2}
have spiritual/religious feelings at work.	1.8	0.33	^{2,3}	3.6	0.24	^{1,3}	5.5	0.15	^{1,2}
rely on spiritual insight in making decisions at work.	2.2	0.33	^{2,3}	3.5	0.24	^{1,3}	5.5	0.15	^{1,2}
pray about work-related issues.	1.8	0.37	^{2,3}	3.1	0.27	^{1,3}	5.3	0.16	^{1,2}
Spiritual Action Score (SAS)	8.2	1.12	^{2,3}	14.5	0.82	^{1,3}	22.0	0.50	^{1,2}
Employee Responses	Employee Spirituality Score								
	Low (n=47)			Medium (n=86)			High (n=341)		
	LS Mean ± SE								
I often...									
follow God's (a Supreme Being's) example in my interactions at work.	2.5	0.17	^{2,3}	4.4	0.13	^{1,3}	5.7	0.06	^{1,2}
have spiritual/religious feelings at work.	2.3	0.19	^{2,3}	3.9	0.14	^{1,3}	5.5	0.07	^{1,2}
rely on spiritual insight in making decisions at work.	2.4	0.19	^{2,3}	3.9	0.14	^{1,3}	5.4	0.07	^{1,2}
pray about work-related issues.	1.9	0.21	^{2,3}	3.7	0.15	^{1,3}	5.4	0.08	^{1,2}
Spiritual Action Score (SAS)	9.04	0.63	^{2,3}	15.8	0.47	^{1,3}	22.0	0.24	^{1,2}

^a SAS is obtained by summing the answers to questions 12 through 15 which comprise Section B of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed SAS.

^b The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 0-4 indicate significantly different SAS Scores in rows based on Spirituality Scores, GLM $p \leq .05$.

There were also no significant differences in manager-rated ETS, assessing how the managers view their employees in matters of trust compared to manager's Religiosity Scores (**Table 14**). There were no significant differences in manager-rated MTS and manager's Spirituality Scores. Managers who had a Medium Spirituality Score rated ETS scores significantly lower than managers who had High Spirituality Scores (**Table 15**).

There were no significant differences when comparing employee-rated MTS (how employees view their manager on matters of trust) with employees' Religiosity Scores. In considering employee-rated ETS (how employees think their manager views them on matters of trust), employees with a Religiosity Score of 4 had a significantly higher ETS than did employees with a Religiosity Score of 0 or 3. Employees with Religiosity Scores of 2 also had a significantly higher ETS than employees with a Religiosity Score of 0 (**Table 16**). There were no significant differences in employee-rated MTS or ETS compared with employee-rated Spirituality Scores (**Table 17**). There were also no significant differences in comparing employee-rated MTS and ETS with manager-rated Religiosity (**Table 18**) and Spirituality (**Table 19**) Scores.

Spiritual Influence (SIS) and Actions(SAS)

Frequencies for individual questions which make up SIS, or the influence of religiosity/spirituality in the workplace (questions 1-11) were assessed. Most of the questions in this section had high levels of agreement from both managers and employees. However, the question about religious beliefs/spirituality being a normal

Table 14. Manager-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Manager Religiosity Scores^c

Manager Responses	0 (n=38)	1 (n=13)	Manager Religiosity Score		3 (n=13)	4 (n=52)
			2 (n=13)	LS Mean ± SE		
In general, my employee's view me as...						
fair.	6.0 ±0.10 ²	5.9 ±0.17	5.5 ±0.17 ^{0,4}		6.0 ±0.17	6.3 ±0.08 ²
honest and trustworthy.	6.1 ±0.11	5.8 ±0.19	5.8 ±0.19 ⁴		6.2 ±0.19	6.3 ±0.10 ²
easily approachable.	6.1 ±0.12 ²	6.2 ±0.21 ²	5.4 ±0.21 ^{0,1,3,4}		6.1 ±0.21 ²	6.2 ±0.10 ²
a person whose actions reflect my beliefs.	5.6 ±0.17	5.3 ±0.29 ⁴	5.5 ±0.29		5.8 ±0.29	6.0 ±0.14 ¹
Manager Trust Score (MTS)	23.8 ±0.39 ²	23.5 ±0.66	22.2 ±0.66 ^{0,4}		24.1 ±0.66	24.6 ±0.33 ²
Manager Responses	0 (n=38)	1 (n=13)	2 (n=13)		3 (n=13)	4 (n=52)
In general, my employees are...						
honest and trustworthy.	5.9 ±0.12 ^{1,2}	5.3 ±0.21 ^{0,4}	5.4 ±0.21 ⁰		5.8 ±0.21	5.8 ±0.11 ¹
individuals whose actions reflect their beliefs.	5.4 ±0.18	4.8 ±0.30 ^{3,4}	4.8 ±0.30 ^{3,4}		5.8 ±0.30 ^{1,2}	5.6 ±0.15 ^{1,2}
committed to me as their manager/supervisor.	5.6 ±0.14	5.3 ±0.24	5.3 ±0.24		5.5 ±0.24	5.6 ±0.12
hard-working and motivated to do their best.	5.8 ±0.16	5.5 ±0.27	5.4 ±0.27		5.5 ±0.27	5.6 ±0.14
committed to their jobs.	5.4 ±0.17	5.4 ±0.30	5.2 ±0.30		5.5 ±0.30	5.5 ±0.15
individuals with strong moral values.	5.5 ±0.17 ¹	4.8 ±0.30 ^{0,3}	5.1 ±0.30		5.6 ±0.30 ¹	5.3 ±0.15
Employee Trust Score (ETS)	33.6 ±0.75	31.1 ±1.28	31.2 ±1.28		33.6 ±1.28	33.5 ±0.64

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the manager survey it denotes how the manager thinks their employees view them on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the manager survey it denotes how the managers actually view their employees on matters of trust.

^c The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Religiosity Scores, GLM $p \leq 0.05$.

Table 15. Manager-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Manager Spirituality Scores^c

Manager Responses	Low (n=16)	Spirituality Score	
		Medium (n=30) LS Mean ± SE	High (n=81)
In general, my employee's view me as...			
honest and trustworthy.	6.3 ±0.18	6.0 ±0.13	6.2 ±0.08
fair.	6.0 ±0.16	5.9 ±0.11	6.1 ±0.07
easily approachable.	6.0 ±0.20	6.0 ±0.14	6.1 ±0.09
a person whose actions reflect my beliefs.	5.4 ±0.26	5.6 ±0.19	5.9 ±0.11
Manager Trust Score (MTS)	23.6 ±0.62	23.4 ±0.45	24.3 ±0.27
Manager Responses	Low (n=16)	Medium (n=30)	High (n=81)
In general, my employees are...			
honest and trustworthy.	5.8 ±0.20	5.5 ±0.14	5.8 ±0.09
hard-working and motivated to do their best.	6.1 ±0.24 ²	5.2 ±0.18 ^{1,3}	5.7 ±0.11 ²
individuals whose actions reflect their beliefs.	5.0 ±0.28	5.1 ±0.20 ³	5.6 ±0.12 ²
committed to their jobs.	5.9 ±0.25	5.1 ±0.18	5.5 ±0.11
committed to me as their manager/supervisor.	5.9 ±0.21 ²	5.3 ±0.15 ¹	5.5 ±0.09
individuals with strong moral values.	5.5 ±0.27 ²	5.2 ±0.20 ¹	5.4 ±0.12
Employee Trust Score (ETS)	34.2 ±1.14	31.4 ±0.83³	33.5 ±0.51²

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the manager survey it denotes how the manager thinks their employees view them on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the manager survey it denotes how the managers actually view their employees on matters of trust.

^c The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Spirituality Scores, GLM p≤.05.

Table 16. Employee-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Employee Religiosity Scores^c

Employee Responses	0 (n=162)	1 (n=55)	Religiosity Score 2 (n=61)		3 (n=50)	4 (n=187)
			LS Mean ± SE			
In general, my director/manager is...						
fair.	5.9 ±0.11	5.9 ±0.18	5.7 ±0.17		5.8 ±0.19	5.9 ±0.10
easily approachable.	5.9 ±0.11	5.9 ±0.19	5.6 ±0.18		5.8 ±0.21	5.9 ±0.11
honest and trustworthy.	5.8 ±0.11	5.9 ±0.19	5.8 ±0.18		5.8 ±0.20	5.8 ±0.10
a person whose actions reflect his/her beliefs.	5.4 ±0.12	5.5 ±0.20	5.4 ±0.19		5.3 ±0.21	5.6 ±0.11
Manager Trust Score (MTS)	23.1 ±0.41	23.2 ±0.69	22.6 ±0.66		22.7 ±0.73	23.2 ±0.38
Employee Responses	0 (n=162)	1 (n=55)	2 (n=61)		3 (n=50)	4 (n=187)
In general, my director/manager views me as						
hard-working and motivated to do my best.	6.1 ±0.07	6.2 ±0.12	6.3 ±0.11		6.0 ±0.13 ⁴	6.3 ±0.06 ³
honest and trustworthy.	6.0 ±0.07 ²	6.1 ±0.12	6.3 ±0.11 ⁰		6.0 ±0.13	6.2 ±0.07
committed to my job.	6.1 ±0.07	6.2 ±0.12	6.3 ±0.11 ³		5.9 ±0.12 ^{2,4}	6.2 ±0.06 ³
a person with strong moral values.	5.7 ±0.08 ^{2,4}	5.9 ±0.13	6.2 ±0.13 ^{0,3}		5.8 ±0.14 ^{2,4}	6.1 ±0.07 ^{0,3}
committed to them as my manager/supervisor.	5.9 ±0.08	6.0 ±0.13	6.1 ±0.13		5.8 ±0.14	6.1 ±0.07
an individual whose actions reflect my beliefs.	5.5 ±0.09 ⁴	5.8 ±0.15	5.8 ±0.14		5.7 ±0.16	6.0 ±0.08 ⁰
Employee Trust Score (ETS)	35.4 ±0.38^{2,4}	36.2 ±0.66	36.9 ±0.63⁰		35.2 ±0.69⁴	36.9 ±0.36^{0,3}

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the employee survey it denotes how the employees actually view their manager on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the employee survey it denotes how the employees think their manager views them on matters of trust.

^c The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Religiosity Scores, GLM p≤.05.

Table 17. Employee-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Employee Spirituality Scores^c

Employee Responses	Low (n=47)	Spirituality Score	
		Medium (n=86) LS Mean ± SE	High (n=341)
In general, my director/manager is...			
honest and trustworthy.	6.2 ±0.13	6.1 ±0.09	6.1 ±0.05
fair.	5.9 ±0.20	5.9 ±0.15	5.9 ±0.07
a person whose actions reflect his/her beliefs.	5.6 ±0.16	5.6 ±0.11 ³	5.9 ±0.06 ²
easily approachable.	6.0 ±0.21	5.9 ±0.16	5.8 ±0.08
Manager Trust Score (MTS)	23.2 ±0.76	23.4 ±0.56	23.0 ±0.28
Employee Responses	Low (n=47)	Medium (n=86)	High (n=341)
In general, my director/manager views me as			
committed to my job.	6.2 ±0.13	6.3 ±0.09	6.2 ±0.05
hard-working and motivated to do my best.	6.2 ±0.13	6.2 ±0.09	6.2 ±0.05
honest and trustworthy.	6.2 ±0.13	6.1 ±0.09	6.1 ±0.05
a person with strong moral values.	5.8 ±0.14	5.9 ±0.10	6.0 ±0.05
committed to them as my manager/supervisor.	6.0 ±0.14	6.0 ±0.10	6.0 ±0.05
an individual whose actions reflect my beliefs.	5.6 ±0.16	5.6 ±0.11	5.9 ±0.06
Employee Trust Score (ETS)	35.9 ±0.69	36.1 ±0.51	36.4 ±0.26

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the employee survey it denotes how the employees actually view their manager on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the employee survey it denotes how the employees think their manager views them on matters of trust.

^c The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Spirituality Scores, GLM $p \leq .05$.

Table 18. Employee-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Manager Religiosity Scores^c

Employee Responses	Manager Religiosity Score				
	0 (n=38)	1 (n=13)	2 (n=13)	3 (n=13)	4 (n=52)
	LS Mean ± SE				
In general, my director/manager is...					
fair.	5.9 ±0.17	5.9 ±0.29	5.7 ±0.29	5.8 ±0.28	5.9 ±0.14
easily approachable.	5.9 ±0.18	6.1 ±0.31	5.5 ±0.31	5.8 ±0.30	6.0 ±0.15
honest and trustworthy.	5.7 ±0.20	5.8 ±0.35	5.8 ±0.35	5.9 ±0.33	5.9 ±0.17
a person whose actions reflect his/her beliefs.	5.4 ±0.20	5.2 ±0.34	5.2 ±0.34	5.6 ±0.33	5.7 ±0.17
Manager Trust Score (MTS)	22.9 ±0.70	23.0 ±1.19	22.2 ±1.19	23.0 ±1.15	23.5 ±0.58
Employee Responses	Manager Religiosity Score				
	0 (n=38)	0 (n=13)	0 (n=13)	0 (n=13)	0 (n=52)
	LS Mean ± SE				
In general, my director views me as...					
honest and trustworthy.	6.2 0.10	6.1 0.16	5.9 0.17 ⁴	6.2 0.17	6.4 0.11 ²
individuals whose actions reflect their beliefs.	5.9 0.12	5.5 0.20 ⁴	5.6 0.21	5.7 0.21	6.0 0.14 ¹
committed to me as their manager/supervisor.	6.0 0.11	6.1 0.18	5.7 0.19 ⁴	6.2 0.18	6.3 0.12 ²
hard-working and motivated to do their best.	6.3 0.10	6.2 0.17	6.1 0.18	6.1 0.18	6.3 0.12
committed to their jobs.	6.3 0.10	6.2 0.17	6.0 0.18	6.1 0.17	6.3 0.12
individuals with strong moral values.	6.1 0.11	5.9 0.18 ⁴	5.8 0.19	6.2 0.19	6.3 0.13 ²
Employee Trust Score (ETS)	54.2 2.29	52.7 3.85	48.6 4.02	53.9 3.85	56.3 1.89

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the employee survey it denotes how the employees actually view their manager on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the employee survey it denotes how the employees think their manager views them on matters of trust.

^c The Religiosity Score is a validated measure of religiosity, takes into account attendance at worship services in the previous month. Scores range from 0 (never attended worship services in the past month) to 4 (attended 4 or more times in the past month).

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Religiosity Scores, GLM $p \leq .05$.

Table 19. Employee-Rated Manager Trust Score (MTS)^a and Employee Trust Score (ETS)^b by Manager Spirituality Scores^c

Employee Responses	Manager Spirituality Score		
	Low (n=16)	Medium (n=30) LS Mean ± SE	High (n=81)
In general, my director/manager is...			
fair.	6.0 ±0.25	6.0 ±0.19	5.9 ±0.11
easily approachable.	5.6 ±0.28	6.0 ±0.21	5.9 ±0.12
honest and trustworthy.	5.5 ±0.30	6.0 ±0.23	5.8 ±0.13
a person whose actions reflect his/her beliefs.	5.2 ±0.29 ²	5.9 ±0.22 ¹	5.5 ±0.13
Manager Trust Score (MTS)	22.2 ±1.04	23.9 ±0.78	23.0 ±0.46

Employee Responses	Manager Spirituality Score		
	Low (n=16)	Low (n=16) LS Mean ± SE	Low (n=16)
In general, my director/manager views me as			
committed to my job.	6.2 0.17	6.3 0.12	6.1 0.08
hard-working and motivated to do my best.	6.2 0.18	6.2 0.12	6.2 0.08
honest and trustworthy.	6.3 0.17	6.2 0.11	6.0 0.08
a person with strong moral values.	6.2 0.19	6.2 0.12 ³	5.8 0.09 ²
committed to them as my manager/supervisor.	6.1 0.18	6.2 0.12 ³	5.8 0.09 ²
an individual whose actions reflect my beliefs.	5.8 0.21	5.9 0.14	5.6 0.10
Employee Trust Score (ETS)	52.7 3.42	58.2 2.65	53.5 1.51

^a MTS is obtained by summing the answers to questions 16 through 19 which comprise Section C of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 4-28 for the summed MTS. On the employee survey it denotes how the employees actually view their manager on matters of trust.

^b ETS is obtained by summing the answers to questions 20 through 25 which comprise Section D of the survey instrument. Possible scores range from 1 to 7 (strongly disagree to strongly agree) for each individual question, or 6-42 for the summed ETS. On the employee survey it denotes how the employees think their manager views them on matters of trust.

^c The Spirituality Score is obtained by summing the religious/spiritual beliefs influence response (0=strongly disagree to 6=strongly agree) and frequency of prayer or meditation (0=never to 5=daily) and therefore ranges from 0-11.

Superscripts 0-4 indicate significantly different MTS and ETS Scores in rows based on Spirituality Scores, GLM p≤.05.

part of discussions with coworkers had only 30.7% of managers in agreement and 38.3% of employees (**Table 20**).

For individual questions which make up the summed SAS (questions 12-15, assessing evidence of religiosity/spirituality in workplace actions), there was a fairly high level of agreement for all questions. Among managers, the agreement with the questions in this section ranged from 55.8% to 72.7%, while for employees the agreement with the questions in this section ranged from 58.8% to 70.0% (**Table 20**).

Spiritual Influence (SIS) and Actions (SAS) and Demographics

Table 21 shows SIS and SAS with respondent demographic characteristics. Among managers, there were no significant differences in SIS and SAS based on ethnic group. Among employees, African Americans had significantly higher SIS (61.3) and SAS (21.6) than did Caucasians (55.7 and 18.6, respectively).

Based on gender, there were again no differences in manager-rated SIS and SAS. Female employees, however, had significantly higher SIS (56.9) and SAS (19.2) than did males (50.6 and 16.7, respectively). Based on age, managers in the 41-50 years category had significantly higher SIS (59.5) than did managers in both the 31-40 years category (50.0) and 51-60 years category (52.4), as well as significantly higher SAS than did managers in the 31-40 years category (15.8). Employees over 51 years had significantly higher SIS than did employees in the 21-30 years category. Employees in the 51-60 years category had significantly higher SAS than did employees ages 21-40. Employees in the 41-50 years category had significantly higher SAS than did employees in the 21-30 years category as well.

Table 20. Frequency of Manager and Employee Responses to individual questions in Sections A and B

Manager Responses	Agree		Neutral		Disagree	
	n	%	n	%	n	%
Section A: My religious beliefs/spirituality...						
...help me deal with stressful situations.	99	77.3	18	14.1	11	8.6
...drive my work ethic.	99	77.3	17	13.3	12	9.4
...guide my interactions with coworkers.	98	77.2	18	14.2	11	8.7
...influence my commitment to my job and to my coworkers.	96	75.0	15	11.7	17	13.3
...guide decisions I make at work.	93	72.7	21	16.4	14	10.9
... influence my individual goals as a manager.	92	71.9	17	13.3	19	14.8
...supply me with wisdom/insight in adapting to conditions in the workplace.	91	71.1	18	14.1	19	14.8
...influence how I establish and follow company policies and procedures.	89	69.5	20	15.6	19	14.8
...are critical in helping me get through the workday.	82	64.1	26	20.3	20	15.6
...are apparent to those with whom I work.	77	60.2	27	21.1	24	18.8
...are a normal part of my discussions with coworkers.	39	30.7	24	18.9	64	50.4
Employee Responses						
Section A: My religious beliefs/spirituality...						
...help me deal with stressful situations.	438	83.4	41	7.8	46	8.76
...drive my work ethic.	408	78.5	57	11.0	55	10.6
...guide my interactions with coworkers.	406	77.3	66	12.6	53	10.1
...influence my commitment to my job and to my coworkers.	399	76.4	64	12.3	59	11.3
...guide decisions I make at work.	390	74.6	74	14.2	59	11.3
... influence my individual goals as a manager.	385	73.5	77	14.7	62	11.8
...supply me with wisdom/insight in adapting to conditions in the workplace.	375	72.3	82	15.8	62	12.0
...influence how I establish and follow company policies and procedures.	380	72.8	76	14.6	66	12.6
...are critical in helping me get through the workday.	352	67.7	86	16.5	82	15.8
...are apparent to those with whom I work.	314	60.0	126	24.1	83	15.9
...are a normal part of my discussions with coworkers.	200	38.3	107	20.5	215	41.2

Table 20. Frequency of Manager and Employee Responses to individual questions in Sections A and B Continued

Manager Responses	Agree		Neutral		Disagree	
	n	%	n	%	n	%
Section B: I often...						
...follow God's (a Supreme Being's) example in my interactions at work.	93	72.7	17	13.3	18	14.1
...have spiritual/religious feelings at work.	78	60.9	15	11.7	35	27.3
...rely on spiritual insight in making decisions at work.	73	57.0	25	19.5	30	23.44
...pray about work-related issues.	72	55.8	15	11.6	42	32.6
Employee Responses						
Section B: I often...						
...follow God's (a Supreme Being's) example in my interactions at work.	367	70.0	87	16.6	71	13.5
...have spiritual/religious feelings at work.	324	61.8	89	17.0	111	21.2
...rely on spiritual insight in making decisions at work.	308	58.8	118	22.5	98	18.7
...pray about work-related issues.	319	60.8	66	12.6	140	26.7

^a Response categories have been collapsed into three categories, Agree (includes agree, somewhat agree, and strongly agree), Neutral (includes neither agree or disagree), and Disagree (includes disagree, somewhat disagree, and strongly disagree).

Table 21. Manager and Employee Demographics by Summed Spiritual Influence (SIS)^a and Spiritual Actions (SAS)^b Scores

	Manager Demographics by Manager-Rated SIS and SAS					Employee Demographics by Employee-Rated SIS and SAS						
	n	%	SIS LS Mean ± SE		SAS LS Mean ± SE		n	%	SIS LS Mean ± SE		SAS LS Mean ± SE	
Ethnic Group:												
African American	2	1.6	60.5	±10.80	20.5	±4.82	42	8.1	61.3	±2.45 ³	21.6	±0.98 ³
Asian & Pacific Islander	3	2.3	68.7	±8.82	24.7	±3.93	29	5.6	59.0	±2.87	19.4	±1.20
Caucasian	120	93.0	54.8	±1.41	18.1	±0.62	419	80.9	55.7	±0.74 ¹	18.6	±0.31 ¹
Hispanic	2	1.6	58.0	±10.80	22.0	±4.82	18	3.5	57.5	±3.61	20.4	±1.49
Native American	2	1.6	54.0	±15.27	19.5	±4.82	6	1.2	54.6	±6.67	16.2	±2.83
Other	0	0	0.0	±0.00	0.0	±0.00	4	0.8	55.8	±7.45	18.8	±3.16
Gender:												
Female	107	83.0	55.8	±1.48	18.6	±0.66	473	90.4	56.9	±0.70 ²	19.2	±0.29 ²
Male	22	17.0	52.5	±3.32	17.5	±1.45	50	9.5	50.6	±2.16 ¹	16.7	±0.89 ¹
Age:												
18-20	0	0.0	0.0	±0.00	0.0	±0.00	0	0.0	0.0	±0.00	0.0	±0.00
21-30	9	7.0	59.8	±5.21	20.5	±2.19	53	29.3	54.5	±1.22 ^{5,6}	18.0	±0.51 ^{4,5}
31-40	28	21.9	50.0	±2.79 ⁴	15.8	±1.24 ⁴	147	28.1	55.2	±1.23	18.4	±0.53 ⁵
41-50	57	44.5	59.5	±1.99 ^{3,5}	20.1	±0.88 ³	136	26.0	57.5	±1.32	19.5	±0.54 ²
51-60	33	25.8	52.4	±2.57 ⁴	17.5	±1.14	73	14.0	59.1	±1.80 ²	20.4	±0.74 ^{2,3}
≥ 60	1	0.8	51.0	±14.75	18.0	±6.56	14	2.7	64.7	±4.70 ²	20.7	±1.69
Education:												
High School Diploma/GED	1	0.8	77.0	±14.95 ⁶	28.0	±6.64	71	13.6	61.5	±1.90 ^{2,3,4,5}	21.3	±0.75 ^{2,3,4,5}
Associate Degree	5	3.9	66.8	±6.68 ⁶	24.2	±2.97 ⁴	51	9.7	55.1	±2.14 ¹	19.1	±0.88 ¹
Bachelor's Degree	42	32.6	57.4	±2.36	19.9	±1.02 ⁴	220	42.0	55.8	±1.02 ¹	18.4	±0.42 ¹
Master's Degree	60	46.5	53.1	±1.95	17.0	±0.86 ^{2,3}	102	19.5	55.1	±1.48 ¹	18.0	±0.63 ¹
Some post grad, no degree	19	14.7	55.0	±3.42	17.8	±1.52	76	14.5	55.7	±1.72 ¹	19.1	±0.72 ¹
Doctoral Degree	2	1.6	40.5	±10.57 ^{1,2}	16.0	±4.70	4	0.8	67.7	±8.56	24.3	±3.14

^a SIS is obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range from 11 to 77.

^b SAS is obtained by summing the answers to questions 12 through 15 which comprise Section B of the survey instrument. Possible scores range from 4 to 28.

Superscripts 1-6 indicate significantly different SIS and SAS Scores in columns based on demographic characteristics, GLM $p \leq .05$.

The education level of managers showed that those who had a high school diploma or an associate's degree had a significantly higher SIS (77.0 and 66.8) than did managers with a doctoral degree (40.5). Managers with an associate's or bachelor's degree also had a higher SAS (24.2 and 19.9) than did managers with a master's degree (17.0). Employees with a high school diploma had a significantly higher SIS and SAS (61.5 and 21.3) than did employees in all other categories except those with a doctoral degree.

Spiritual Influence (SIS) and Actions(SAS) and Job Factors

Table 22 shows SIS and SAS with job factors. Differences between type of manager and type of employee were reported. Those who were the CNM rated themselves significantly higher in SIS (56.6) and SAS (19.0) than those who were the DFNS (54.0 and 17.8, respectively). There were no significant differences in SIS and SAS based on employee type.

There were no significant differences in manager-rated SIS and SAS based on the degree to which the manager enjoyed their job. Among employees, both SIS and SAS were significantly lower among employees who *strongly disagreed* that they enjoy their job than among employees in any other response category. Those employees who *strongly agreed* to enjoying their current job had a higher SIS than did employees who agreed to any other degree, as well as a higher SAS than did those employees who only *somewhat agreed* to enjoying their current job. Using Pearson's Correlation Procedure, there were no significant relationships between manager-rated SIS and SAS and employee job enjoyment, or employee intentions to change jobs in the near future.

Table 22. Manager and Employee Spiritual Influence (SIS)^a and Spiritual Actions (SAS)^b Scores by Job Factors

	Manager Job Factors by Manager SIS and SAS				Employee Job Factors by Employee SIS and SAS			
	n	%	SIS LS Mean ± SE	SAS LS Mean ± SE	n	%	SIS LS Mean ± SE	SAS LS Mean ± SE
Manager Type:								
Director of Food and Nutrition Service	66	51.2	54.0 ±1.88 ²	17.8 ±0.84 ²				
Clinical Nutrition Manager	63	48.8	56.6 ±1.95 ¹	19.0 ±0.86 ¹				
Employee Type:								
Foodservice/Supervisor					198	37.7	57.1 ±1.09	19.4 ±0.45
Clinical Nutrition					332	62.6	55.8 ±0.45	18.6 ±0.35
Manager's Time in all Management Positions:								
Less than 1 year	3	2.3	60.0 ±10.93	22.3 ±3.97				
1 to 5 years	26	20.3	54.2 ±3.03	18.0 ±1.35				
6 to 10 years	14	10.9	57.2 ±4.13	16.9 ±1.84				
11 to 20 years	37	28.9	54.4 ±2.58	18.2 ±1.15				
Greater than 20 years	48	37.5	55.7 ±2.26	18.9 ±0.99				
Employee's Time with Current Manager:								
Less than 1 year					99	19.0	55.5 ±1.51	18.6 ±0.64
1 to 5 years					294	56.2	55.9 ±0.89	18.7 ±0.37
6 to 10 years					69	13.2	58.0 ±1.84	20.2 ±0.76
11 to 20 years					45	8.65	58.7 ±2.32	18.6 ±0.64
Greater than 20 years					16	3.1	59.1 ±3.97	20.4 ±1.58
Enjoy Job:								
Strongly Disagree	0	0.0	0.0 ±0.00	0.0 ±0.00	1	0.2	21.0 ±14.7 ^{2,3,4,5,6}	4.0 ±6.28 ^{2,3,4,5,6}
Disagree	0	0.0	0.0 ±0.00	0.0 ±0.00	3	0.6	70.5 ±10.4 ¹	23.3 ±3.63 ¹
Somewhat Disagree	1	0.8	38.0 ±15.25	11.0 ±6.82	17	3.2	58.9 ±3.68 ¹	19.4 ±1.52 ¹
Neither Agree or Disagree	0	0.0	0.0 ±0.00	0.00 ±0.00	13	2.5	58.1 ±4.25 ¹	19.9 ±1.74 ¹
Somewhat Agree	11	8.5	58.8 ±4.82	20.5 ±2.06	80	15.3	53.1 ±1.67 ^{1,7}	17.7 ±0.71 ^{1,7}
Agree	45	34.9	55.9 ±2.33	18.4 ±1.03	237	45.2	55.4 ±0.98 ^{1,7}	18.9 ±0.41 ¹
Strongly Agree	72	55.8	54.6 ±1.80	18.2 ±0.80	173	33.0	58.8 ±1.15 ^{1,5,6}	19.6 ±0.48 ^{1,5}

Table 22. Manager and Employee Spiritual Influence (SIS)^a and Spiritual Actions (SAS)^b Scores by Job Factors Continued

	Manager Job Factors by Manager SIS and SAS				Employee Job Factors by Employee SIS and SAS					
	n	%	SIS LS Mean ± SE	SAS LS Mean ± SE	n	%	SIS LS Mean ± SE	SAS LS Mean ± SE		
Employee Plans to Change Job:										
Strongly Disagree					99	18.9	56.8	1.57	18.9	0.64
Disagree					131	25.0	57.5	1.32	19.3	0.56
Somewhat Disagree					25	4.8	56.7	3.05	18.9	1.27
Neither Agree or Disagree					105	20.0	57.4	1.49	19.5	0.62
Somewhat Agree					79	15.1	54.4	1.71	17.9	0.73
Agree					37	7.1	55.3	2.53	19.1	1.04
Strongly Agree					48	9.2	53.4	2.23	18.5	0.92

^a SIS is obtained by summing the answers to questions 1 through 11 which comprise Section A of the survey instrument. Possible scores range from 11 to 77.

^b SAS is obtained by summing the answers to questions 12 through 15 which comprise Section B of the survey instrument. Possible scores range from 4 to 28.

Superscripts 1-7 indicate significantly different SIS and SAS Scores in columns based on demographic characteristics, GLM $p \leq .05$.

Spiritual Influence (SIS) and Actions(SAS) and Trust (MTS and ETS)

Pearson's Correlation Procedure showed there was not a significant correlation between manager-rated SIS and SAS and manager- or employee-rated MTS and ETS. There was a significant correlation between employee-rated SIS and employee-rated MTS ($p=.01$), and employee-rated ETS ($p<.0001$). There were also significant correlations between employee-rated SAS and employee-rated MTS ($p=.009$) and employee-rated ETS ($p<.0001$).

Internal Validity

On questions concerning internal validity, there were highly significant correlations reported using Pearson's Correlation Procedure. These included the following:

- Questions #4 (My religious beliefs/spirituality guide decisions I make at work) and #15 (I often rely on spiritual insight in making decisions at work) on both the manager and employee survey questionnaires (both $p<.0001$);
- Questions #10 (My religious beliefs/spirituality are a normal part of my discussions with coworkers) and #30 (I [my manager] talk[s] about my[his/her] most important values and beliefs) on manager ($p<.0001$) and employee ($p=.0014$) survey questionnaires; and
- Questions #12 (I often pray about work-related issues) and #72 (How often do you pray or meditate?) on both manager and employee survey questionnaires (both $p<.0001$).

DISCUSSION/CONCLUSIONS

The respondents in this study seemed to be religious and spiritual people. There were not large differences seen between managers' and employees' Religiosity (40.3% and 36.3%, respectively) and Spirituality (66.7% and 68.7%, respectively) Scores, although Spirituality Scores of both managers and employees were a good deal higher than were Religiosity Scores. These findings coincide with national data of attendance at worship services and frequency of prayer. The fact that there was a linear relationship between increases in Religiosity Scores and increases in Spirituality Scores among respondents was also consistent with national findings, although the national survey compared only worship services with frequency of prayer.

Addressing the Hypotheses

- 1. Managers who have a higher religiosity score will also have higher transformational leadership scores than managers with lower religiosity scores.*

The data do not support this hypothesis. Managers in this sample with higher Religiosity and Spirituality Scores did not rate themselves higher on individual Transformational Characteristic Scales or the summed Transformational Leadership Score.

There was also no apparent correlation between Transformational Leadership Scores and the influence of a manager's spirituality in the workplace or on their workplace actions. This was surprising given that the definition of transformational leadership involves managers and employees bringing each other to higher levels of

morality, as well as managers discussing their most important beliefs and values in the workplace. The statement, “I (My director/manager) talk(s) about my (their) most important values and beliefs” was in fact the statement from the Multifactor Leadership Questionnaire which had the lowest percentages of frequent agreement that the statement described them/their manager from both managers (42.6%) and employees (26.6%).

II. Managers who have a higher religiosity score will receive a higher score when rated by their subordinates regarding transformational leadership characteristics than managers who have lower religiosity scores.

This hypothesis was not supported by the information gathered in this sample. There did not seem to be any significant relationship between managers’ Religiosity and Spirituality Scores and scores on employee-rated individual Transformational Leadership Scales or the summed Transformational Leadership Scores.

The reasons for the disagreement between the data and the first two hypotheses are unclear. It may be that the measurements of religiosity and spirituality used do not capture those elements which would relate more closely to transformational leadership characteristics. More research is necessary to determine which aspects of an individual’s religiosity and spirituality impact leadership style, and how this affects the workplace and relationships between leaders and followers.

III. Managers who have a higher religiosity score will have a higher level of agreement regarding statements of spirituality and workplace practices than will those with lower scores.

The study data support this hypothesis. Increases in religiosity and spirituality of the sample corresponded with increases in agreement with statements regarding the

influence of a respondent's religiosity and spirituality in the workplace, as well as on their actions in the workplace. This included not only managers, but employees as well. Although there was high agreement from respondents with questions on these subjects, there was low agreement with the question concerning discussion of religious beliefs in the workplace, consistent with other research findings.

Although religiosity and spirituality did not seem to be significantly related to job enjoyment, it is notable that a large percentage of respondents who agreed to some degree to enjoying their job also had Religiosity Scores of 4 (40.3%) and High Spirituality Scores (63.8%).

IV. Subordinates' ratings of their manager's transformational leadership

characteristics will be lower than the manager's self-rating of transformational leadership characteristics.

Consistent with other research findings, managers in this study rated themselves significantly higher than did their employees on each individual Transformational Leadership Scale, as well as the summed Transformational Leadership Score. While it supports this hypothesis, the information gathered does not allow further interpretation about this observation, but it seems that further research to determine the nature of the gap between manager and employee perceptions of leadership qualities and the impact on the workplace is warranted.

Other Discussion

Although Religiosity and Spirituality did not seem to significantly impact TFS, there were other factors examined which did seem to have an effect on TFS. Directors of

Food and Nutrition Services (DFNS) rated themselves higher and were rated higher by their subordinates than Clinical Nutrition Managers (CNM) on TFS. This was the case even though there did not seem to be a relationship between TFS and whether the manager was hired from within or from outside the organization. Although it is difficult to explain this finding based on the information collected, it seems to warrant further investigation since managers and employees who had higher levels of agreement on enjoyment of their job also had higher self-rated TFS scores or scored their managers higher in TFS than did those managers and employees in most other response categories. This finding is consistent with research showing that employees who work for a leader who is seen as having higher levels of transformational leadership also seem to have greater job satisfaction than do employees whose manager seems to exhibit lower levels of transformational leadership.

Higher TFS scores were also positively correlated with measures of trust. Managers who rated themselves higher in TFS also believed their employees had higher levels of trust in them and had higher levels of trust in their employees. Employees who rated their manager higher in TFS actually did have higher levels of trust in their managers, and believed their managers had higher levels of trust in them.

Although significant differences may or may not have been found between factors considered and many of the response categories, it is important to consider the likelihood of practical differences. It is difficult to assure that differences wouldn't have been more or less significant between response categories with wider representation. In many cases, there was not much variance demographically in the sample, although this may be representative of the population from which the sample came. For example, 83.0% of

managers and 93.4% of employees included in this survey were female. There were also 93.0 % of managers and 80.9% of employees who were Caucasian. Another example is the question of job enjoyment. Only one out of 129 managers and 21 out of 530 employees disagreed to any degree to enjoying their job. Due to this fact, many of the findings in this study are not conclusive, but suggest where further research could assist in discovering the true nature of relationships examined and their impact on leadership theory.

Again, religiosity, to some degree, and spirituality, to an even greater degree, influence managerial practices. However, management and leadership theories largely ignore religion and spirituality as important factors of leadership behavior. While transformational leadership hints at a relationship between spirituality and effective leadership, this study did not find them to be related.

Further Research

One area for further research could include a more in depth study of the differences between Directors of Food and Nutrition Services and Clinical Nutrition Managers, since this study showed that there were significant differences between self- and employee-rated Transformational Leadership Scores. The nature of these differences as well as an examination of some of the causes of these differences could be valuable to furthering the understanding of leadership in dietetics.

Another area for further research would be an examination of the differences in perception of leadership characteristics and behaviors between managers and their

subordinates. A study of the nature of the gap in perception as well as the impact of the gap on managers, their subordinates, and the workplace could be enlightening.

Additional investigation of the role that religiosity/spirituality play in effective leadership practices would also be warranted, since these factors clearly influence the workplace and managers and employees in the workplace.

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Appendix A: Manager Questionnaire

- Manager Questionnaire Cover Letter
- Manager Questionnaire

RELIGIOSITY/SPIRITUALITY AND WORKPLACE PRACTICES

Fall 2003

Dear Director/Manager:

The professional relationship between supervisors and supervisees influences the workplace environment. Many aspects of this relationship have already been studied. A topic that has been increasingly studied is religiosity/spirituality in the workplace. We are investigating the impact of religiosity/spirituality on workplace relationships of foodservice and nutrition managers and those they supervise.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Shane Schulthies, Chair of the IRB at (801) 422-5490. There are no known risks or discomforts associated with participation. Completion of the survey indicates your willingness to participate. The code number on the survey is for the use in data analysis. Only combined results will be reported; individual responses will be kept confidential.

The following pages include questions for you to respond to about yourself and those you directly supervise. The survey should take about 10 minutes to complete. Your participation is voluntary; however, in order to obtain data representative of Directors in Food and Nutrition Services, Clinical Nutrition Managers, and their subordinates, we need your participation. The results of this study may shed light on aspects of management that have been largely unexamined. Please complete this questionnaire and return it in the business reply envelope within the next **three weeks**.

We appreciate your assistance!

Sincerely,

Anna Sarver
Graduate Student

Jennifer Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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Use the following scale to answer the questions in Sections A through D.

Circle the appropriate number.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

A. My religious beliefs/spirituality...

1. ...guide my interactions with coworkers. 1 2 3 4 5 6 7
2. ...help me deal with stressful situations. 1 2 3 4 5 6 7
3. ...drive my work ethic. 1 2 3 4 5 6 7
4. ...guide decisions I make at work. 1 2 3 4 5 6 7
5. ...influence my commitment to my job and to my coworkers. 1 2 3 4 5 6 7
6. ...influence how I establish and follow company policies and procedures. 1 2 3 4 5 6 7
7. ...influence my individual goals as a manager. 1 2 3 4 5 6 7
8. ...are apparent to those with whom I work. 1 2 3 4 5 6 7
9. ...supply me with wisdom/insight in adapting to conditions in the workplace. 1 2 3 4 5 6 7
10. ...are a normal part of my discussions with coworkers. 1 2 3 4 5 6 7
11. ...are critical in helping me get through each workday. 1 2 3 4 5 6 7

B. I often...

12. ...pray about work-related issues. 1 2 3 4 5 6 7
13. ...have spiritual/religious feelings at work. 1 2 3 4 5 6 7
14. ...follow God's (a Supreme Being's) example in my interactions a work. 1 2 3 4 5 6 7
15. ...rely on spiritual insight in making decisions at work. 1 2 3 4 5 6 7

C. In general, my employees view me as...

16. ...fair. 1 2 3 4 5 6 7
17. ...easily approachable. 1 2 3 4 5 6 7
18. ...honest and trustworthy. 1 2 3 4 5 6 7
19. ...a person whose actions reflect my beliefs. 1 2 3 4 5 6 7

D. In general, my employees are...

20. ...honest and trustworthy. 1 2 3 4 5 6 7
21. ...individuals whose actions reflect their beliefs. 1 2 3 4 5 6 7
22. ...individuals with strong moral values. 1 2 3 4 5 6 7
23. ...committed to their jobs. 1 2 3 4 5 6 7
24. ...committed to me as their manager/supervisor. 1 2 3 4 5 6 7
25. ...hard-working and motivated to do their best. 1 2 3 4 5 6 7

E. Use the following scale to rate how frequently the following statements fit you...
 (The word "others" may mean your peers, clients, direct reports, supervisors, and/or all of these individuals.) Circle the appropriate number.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always	
0	1	2	3	4	
26. I provide others with assistance in exchange for their efforts	0	1	2	3	4
27. I re-examine critical assumptions to question whether they are appropriate	0	1	2	3	4
28. I fail to interfere until problems become serious	0	1	2	3	4
29. I focus attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
30. I talk about my most important values and beliefs	0	1	2	3	4
31. I seek differing perspectives when solving problems	0	1	2	3	4
32. I talk optimistically about the future	0	1	2	3	4
33. I instill pride in others for being associated with me	0	1	2	3	4
34. I discuss in specific terms who is responsible for achieving performance objectives	0	1	2	3	4
35. I wait for things to go wrong before taking action	0	1	2	3	4
36. I talk enthusiastically about what needs to be accomplished	0	1	2	3	4
37. I specify the importance of having a strong sense of purpose	0	1	2	3	4
38. I spend time teaching and coaching	0	1	2	3	4
39. I make clear what one can expect to receive when performance goals are achieved	0	1	2	3	4
40. I show that I am a firm believer in "if it ain't broke, don't fix it."	0	1	2	3	4
41. I go beyond self-interest for the good of the group	0	1	2	3	4
42. I treat others as individuals rather than just a member of the group	0	1	2	3	4
43. I demonstrate that problems must become chronic before I take action	0	1	2	3	4
44. I act in ways that build others' respect for me	0	1	2	3	4
45. I concentrate my full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
46. I consider the moral and ethical consequences of decisions	0	1	2	3	4
47. I keep track of all mistakes	0	1	2	3	4
48. I display a sense of power and confidence	0	1	2	3	4
49. I articulate a compelling vision of the future	0	1	2	3	4
50. I direct my attention toward failures to meet standards	0	1	2	3	4
51. I consider an individual as having different needs, abilities, and aspirations from others	0	1	2	3	4
52. I get others to look at problems from many different angles	0	1	2	3	4
53. I help others develop their strengths	0	1	2	3	4
54. I suggest new ways of looking at how to complete assignments	0	1	2	3	4
55. I emphasize the importance of having a collective sense of mission	0	1	2	3	4
56. I express satisfaction when others meet expectations	0	1	2	3	4
57. I express confidence that goals will be achieved	0	1	2	3	4

Source of questions 26-57: Multifactor Leadership Questionnaire Form 5X-Short. © Copyright 1995, 2000 by Bernard Bass and Bruce Avolio. Adapted with permission. Published by Mind Garden Inc. All rights reserved.

Please turn page to complete questionnaire →

F. About you...

Check the box of the appropriate answer

58. Ethnic group:
 African American
 Asian and Pacific Islander
 Caucasian
 Native American
 Other (Specify) _____
59. Gender:
 Female Male
60. Age:
 21-30 41-50 ≥ 61
 31-40 51-60
61. Level of education:
 Associate Degree
 Bachelor's Degree
 Master's Degree
 Some post grad, but no degree
 Doctoral degree

Degree area: _____
62. What is your job title?

63. Your pay/salary:
 10-19,000/year
 20-30,000/year
 31-40,000/year
 41-50,000/year
 61-70,000/year
 >70,000/year
64. How many hours do you work each week?

Is this considered:
 Full time
 Part time
65. In general, I enjoy my role as a director/manager.
 Strongly agree
 Agree
 Somewhat agree
 Neither agree or disagree
 Somewhat disagree
 Disagree
 Strongly disagree
66. Time period in current position:
 less than one year 9-11 years
 1-2 years 12-14 years
 3-5 years ≥ 15 years
 6-8 years
67. Total time in **all** management positions:
 less than one year
 1-5 years
 6-10 years
 11-20 years
 more than 20 years
68. Were you...
 hired to your current position from outside the hospital.
 promoted from within the hospital to your current position.
69. In the past month, how many times have you attended worship services (if never, enter 0)? _____
70. What is your religious preference?
 Atheist Muslim
 Buddhist Protestant
 Catholic Jewish
 Hindu None
 Other _____
71. My religious/spiritual beliefs influence my daily life:
 Strongly agree
 Agree
 Somewhat agree
 Neither agree or disagree
 Somewhat disagree
 Disagree
 Strongly disagree
72. How often do you pray or meditate?
 Daily
 Most days
 Once or twice a week
 A few times a month
 Seldom
 Never

Thank you for your assistance.

Appendix B: Employee Questionnaire

- Employee Questionnaire Cover Letter
- Employee Questionnaire

RELIGIOSITY/SPIRITUALITY AND WORKPLACE PRACTICES

Fall 2003

Dear Foodservice/Clinical Nutrition Team Member:

The professional relationship between supervisors and supervisees influences the workplace environment. Many aspects of this relationship have already been studied. A topic that has been increasingly studied is religiosity/spirituality in the workplace. We are investigating the impact of religiosity/spirituality on workplace relationships of foodservice and nutrition employees and their director/managers. Your hospital has been selected for participation in this study from the American Hospital Association database.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Shane Schulthies, Chair of the IRB at (801) 422-5490. There are no known risks or discomforts associated with participation. Completion of the survey indicates your willingness to participate. The code number on the survey is for the use in data analysis. Only combined results will be reported; individual responses will be kept confidential.

The following pages include questions for you to respond to about yourself and your director/manager. The survey should take about 10 minutes to complete. Your participation is voluntary; however, in order to obtain data representative of foodservice and nutrition employees and their directors/managers, we need your participation. The results of this study may shed light on aspects of workplace practices that have been largely unexamined. Please complete this questionnaire and return it in the business reply envelope within the next **three weeks**.

We appreciate your assistance!

Sincerely,

Anna Sarver
Graduate Student

Jennifer Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

DEPARTMENT OF NUTRITION, DIETETICS, AND FOOD SCIENCE
BRIGHAM YOUNG UNIVERSITY • S221 EYRING SCIENCE CENTER • PROVO, UTAH 84602-4602
(801) 422-3912/ FAX (801) 422-0258 • workplacesurvey@byu.edu

Use the following scale to answer the questions in Section A through D.

Circle the appropriate number.

Strongly Disagree 1	Disagree 2	Somewhat Disagree 3	Neither Agree or Disagree 4	Somewhat Agree 5	Agree 6	Strongly Agree 7
------------------------	---------------	------------------------	--------------------------------	---------------------	------------	---------------------

A. My religious beliefs/spirituality...

1. ...guide my interactions with coworkers. 1 2 3 4 5 6 7
2. ...help me deal with stressful situations. 1 2 3 4 5 6 7
3. ...drive my work ethic. 1 2 3 4 5 6 7
4. ...guide decisions I make at work. 1 2 3 4 5 6 7
5. ...influence my commitment to my job and to my coworkers. 1 2 3 4 5 6 7
6. ...influence how I follow company policies and procedures. 1 2 3 4 5 6 7
7. ...influence my individual goals as an employee. 1 2 3 4 5 6 7
8. ...are apparent to those with whom I work. 1 2 3 4 5 6 7
9. ...supply me with wisdom/insight in adapting to conditions in the workplace. 1 2 3 4 5 6 7
10. ...are a normal part of my discussions with coworkers. 1 2 3 4 5 6 7
11. ...are critical in helping me get through each workday. 1 2 3 4 5 6 7

B. I often...

12. ...pray about work-related issues. 1 2 3 4 5 6 7
13. ...have spiritual/religious feelings at work. 1 2 3 4 5 6 7
14. ...follow God's (a Supreme Being's) example in my interactions a work. 1 2 3 4 5 6 7
15. ...rely on spiritual insight in making decisions at work. 1 2 3 4 5 6 7

C. In general, my director/manager is...

16. ...fair. 1 2 3 4 5 6 7
17. ...easily approachable. 1 2 3 4 5 6 7
18. ...honest and trustworthy. 1 2 3 4 5 6 7
19. ...a person whose actions reflect his/her beliefs. 1 2 3 4 5 6 7

D. In general, my director/manager views me as...

20. ...honest and trustworthy. 1 2 3 4 5 6 7
21. ...an individual whose actions reflect my beliefs. 1 2 3 4 5 6 7
22. ...a person with strong moral values. 1 2 3 4 5 6 7
23. ...committed to my job. 1 2 3 4 5 6 7
24. ...committed to them as my manager/supervisor. 1 2 3 4 5 6 7
25. ...hard working and motivated to do my best. 1 2 3 4 5 6 7

E. Use the following scale to rate how frequently the following statements describe your Director/Manager...

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
	0	1	2	3	4
26. Provides me with assistance in exchange for my efforts	0	1	2	3	4
27. Re-examines critical assumptions to question whether they are appropriate	0	1	2	3	4
28. Fails to interfere until problems become serious	0	1	2	3	4
29. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
30. Talks about their most important values and beliefs	0	1	2	3	4
31. Seeks differing perspectives when solving problems	0	1	2	3	4
32. Talks optimistically about the future	0	1	2	3	4
33. Instills pride in me for being associated with him/her	0	1	2	3	4
34. Discusses in specific terms who is responsible for achieving performance objectives	0	1	2	3	4
35. Waits for things to go wrong before taking action	0	1	2	3	4
36. Talks enthusiastically about what needs to be accomplished	0	1	2	3	4
37. Specifies the importance of having a strong sense of purpose	0	1	2	3	4
38. Spends time teaching and coaching	0	1	2	3	4
39. Makes clear what one can expect to receive when performance goals are achieved	0	1	2	3	4
40. Shows that he/she is a firm believer in "if it ain't broke, don't fix it."	0	1	2	3	4
41. Goes beyond self-interest for the good of the group	0	1	2	3	4
42. Treats me as an individual rather than just a member of the group	0	1	2	3	4
43. Demonstrates that problems must become chronic before taking action	0	1	2	3	4
44. Acts in ways that build my respect	0	1	2	3	4
45. Concentrates his/her full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
46. Considers the moral and ethical consequences of decisions	0	1	2	3	4
47. Keeps track of all mistakes	0	1	2	3	4
48. Displays a sense of power and confidence	0	1	2	3	4
49. Articulates a compelling vision of the future	0	1	2	3	4
50. Directs my attention toward failures to meet standards	0	1	2	3	4
51. Considers me as having different needs, abilities, and aspirations from others	0	1	2	3	4
52. Gets me to look at problems from many different angles	0	1	2	3	4
53. Helps me to develop my strengths	0	1	2	3	4
54. Suggests new ways of looking at how to complete assignments	0	1	2	3	4
55. Emphasizes the importance of having a collective sense of mission	0	1	2	3	4
56. Expresses satisfaction when I meet expectations	0	1	2	3	4
57. Expresses confidence that goals will be achieved	0	1	2	3	4

Source of questions 26-57: Multifactor Leadership Questionnaire Form 5X-Short. © Copyright 1995, 2000 by Bernard Bass and Bruce Avolio. Adapted with permission. Published by Mind Garden Inc. All rights reserved.

Please turn page to complete questionnaire →

F. About you...

Check the box of the appropriate answer.

58. Ethnic group:
 African American
 Asian and Pacific Islander
 Caucasian
 Native American
 Other (Specify) _____
59. Gender:
 Female Male
60. Age:
 18-20 31-40 51-60
 21-30 41-50 ≥ 61
61. Level of education:
 High School Diploma or GED
 Associate Degree
 Bachelor's Degree
 Master's Degree
 Some post grad, but no degree
 Doctoral degree

If degree, area: _____
62. What is your job title?

63. Your pay/Salary:
 10-19,000/year
 20-30,000/year
 31-40,000/year
 41-50,000/year
 61-70,000/year
 >70,000/year
64. How many hours do you work each week?

Is this considered:
 Full time
 Part time
65. In general, I enjoy my current job.
 Strongly agree
 Agree
 Somewhat agree
 Neither agree or disagree
 Somewhat disagree
 Disagree
 Strongly disagree
66. Time period in current position:
 less than one year 9-11 years
 1-2 years 12-14 years
 3-5 years ≥ 15 years
 6-8 years
67. Time period you have worked with your current manager?
 less than one year
 1-5 years
 6-10 years
 11-20 years
 more than 20 years
68. I am considering a job change in the near future.
 Strongly agree
 Agree
 Somewhat agree
 Neither agree or disagree
 Somewhat disagree
 Disagree
 Strongly disagree
69. In the past month, how many times have you attended worship services (if never, enter 0)? _____
70. What is your religious preference?
 Atheist Muslim
 Buddhist Protestant
 Catholic Jewish
 Hindu None
 Other _____
71. My religious/spiritual beliefs influence my daily life.
 Strongly agree
 Agree
 Somewhat agree
 Neither agree or disagree
 Somewhat disagree
 Disagree
 Strongly disagree
72. How often do you pray or meditate?
 Daily
 Most days
 Once or twice a week
 A few times a month
 Seldom
 Never

Thank you for your assistance.

Appendix C: IRB Approval

- IRB Approval

INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS



August 19, 2003

Anna Naegle
1576 N. Moonrive Dr. #7
Provo, UT 84604

Dear Anna:

Thank you for your recent correspondence concerning your protocol entitled "Religiosity/Spirituality and Transformational Leadership in Hospital Food and Nutrition Managers." The research appears to pose minimal risk to human subjects and meets the Federal guidelines. The Board offered the following suggestions. You are approved to begin your research as is, or if you decide to incorporate the suggestions, please send us an updated consent document and questionnaire.

1. Change religiosity/spirituality to Social Background factors which includes religiosity.
2. Move the religiosity items in the questionnaire to the section that includes ethnicity, age, sex, education etc.

You are approved to begin your research. This approval is good for a maximum of one year, at which time, and sooner as need arises, the study will be reviewed again if the work is still in progress. Enclosed is a date stamped consent form. Please use this in obtaining consent. We will be sending a continuing review form before the expiration date. Please fill this form out in a timely manner to insure that there is not a lapse in your approval.

Please notify Nancy Davis, (801) 422-2970, A-261 ASB, of any changes made in the instruments, consent form, or research process before instigating the alterations, so that we can approve them.

If you have any questions, please let us know. We wish you well with your research!

Sincerely,

Dr. Shane S. Schulthies, Chair /
Nancy A. Davis, CIM, Administrator
Institutional Review Board for Human Subjects
SSS/sgf

BRIGHAM YOUNG UNIVERSITY · A-261 ASB · PROVO, UTAH 84602

(801) 422-3841 / FAX: (801) 422-0620

Appendix D: Pilot Survey Materials

- Pilot survey cover letter for Directors of Food and Nutrition Services (DFNS)
- Pilot survey cover letter for Clinical Nutrition Managers (CNM)
- Pilot survey questionnaire for directors/managers
- Pilot survey questionnaire for employees

NUTRITION, DIETETICS AND FOOD SCIENCE
BRIGHAM YOUNG UNIVERSITY
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(801) 422-3912 / FAX: (801) 422-0258



July 28, 2003

◇

Dear ◇:

Thank you for agreeing to participate in the pilot study for our research project on religiosity/spirituality and management in a healthcare setting.

Would you please assist us with the following:

- Read the initial cover letter and **blue** postcard. Note steps 1-4 on the initial cover letter. Follow these steps, but instead of sending back the postcard (as indicated in step 1), simply evaluate it on the **green** pilot questionnaire.
- For step two, we have included the packets for you and your clinical nutrition manager (if you have one at your facility). Please give the appropriately labeled packet to the clinical nutrition manager.
- Distribute **blue** employee surveys to three or four of those you supervise. (Step 3)
- Read the cover letter included with the packet labeled "Director of Food and Nutrition Services".
- Respond to the **cream** survey. (Step 4)
- Take a few additional minutes to answer the questions on the **green** pilot questionnaire about the letter and survey. Please ask your employees to fill out the **yellow** pilot questionnaire.

Once completed, you and your employees can return both the surveys and pilot questionnaires individually in the enclosed business reply envelopes by August 8, 2003.

Thank you for your assistance.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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July 28, 2003

Dear Clinical Nutrition Manager:

Thank you for participating in the pilot study for our research project on religiosity/spirituality and management in a healthcare setting.

Would you please assist us with the following:

- Read the initial cover letter and **gold** postcard. Note steps 1-4 on the initial cover letter. Follow these steps, but instead of sending back the postcard (as indicated in step 1), simply evaluate it on the **green** pilot questionnaire.
- Distribute **blue** employee surveys to three or four of those you supervise. (Step 3)
- Read the cover letter included with the packet labeled "Clinical Nutrition Manager".
- Respond to the **cream** survey. (Step 4)
- Take a few additional minutes to answer the questions on the **green** pilot questionnaire about the letter, postcard, and survey. Please ask your employees to fill out the **yellow** pilot questionnaire.

Once completed, you and your employees can return both the surveys and pilot questionnaires individually in the enclosed business reply envelopes by August 8, 2003.

Thank you for your assistance.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

Pilot Questionnaire

Answer the questions about each of the following:

	Initial Cover Letter		Postcard		Packet Instruction Letter		Survey Cover Letter	
	Yes	No	Yes	No	Yes	No	Yes	No
1. Was it clear? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Was it concise? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was it easily understood? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Did you have any questions after reading the... Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Answer the following questions about the survey.

1. Is the wording of any question confusing? Yes No
If yes, which question(s)? _____

2. Is the survey itself readable? Yes No
Comments _____

3. Are any questions offensive? Yes No
If yes, which question(s)? _____

4. Is the flow of questions logical? Yes No
Comments? _____

5. Are there any additional questions or issues that you feel should be addressed in the survey?
 Yes No Comments: _____

6. Approximately how long did it take for you to complete the survey? _____
7. Please give any other suggestions or comments: _____

Pilot Questionnaire

Survey Cover Letter (front page of survey)

1. Was the cover letter:

Clear? Yes No

Comments _____

Concise? Yes No

Comments _____

Easily understood? Yes No

Comments _____

2. Did you have any questions after reading the survey cover letter? Yes No

Comments _____

Answer the following questions about the **survey**.

1. Is the wording of any question confusing? Yes No

If yes, which question(s)? _____

8. Is the survey itself readable? Yes No

Comments _____

9. Are any questions offensive? Yes No

If yes, which question(s)? _____

10. Is the flow of questions logical? Yes No

Comments? _____

11. Are there any additional questions or issues that you feel should be addressed in the survey?

Yes No Comments: _____

12. Approximately how long did it take for you to complete the survey? _____

13. Please give any other suggestions or comments: _____

Appendix E: Initial Request for Participation

- Initial letter to Directors of Food and Nutrition Services (DFNS) requesting participation
- Response Postcard for DFNS accepting or declining invitation for participation
- Initial letter to Clinical Nutrition Managers (CNM) requesting participation
- Response Postcard for CNM accepting or declining invitation for participation

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(801) 422-3912 / FAX: (801) 422-0258



Director of Food and Nutrition Services

October 2, 2003

Dear Director of Food and Nutrition Services:

Management is a complex and challenging task. One aspect of management that has received quite a bit of recent attention in popular management literature is spirituality. However, little research has been done in this area. We are investigating the impact of religiosity/spirituality on workplace relationships of foodservice and nutrition managers and those whom they supervise.

Your hospital has been selected for participation in this study from the American Hospital Association database. Our study is designed for participation from the following:

- Directors of Food and Nutrition Services and those under their direct supervision.
[i.e. foodservice managers/supervisors, dietitians, and diet techs (who do not report to a clinical nutrition manager)] and,
- Clinical Nutrition Managers (where applicable) and those directly under their supervision (i.e. dietitians, diet techs, etc.).

In order to obtain data representative of Directors in Food and Nutrition Services, Clinical Nutrition Managers, and their subordinates, we need your participation.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Shane Schulthies, Chair of the IRB at (801) 422-5490. There are no known risks or discomforts associated with participation. Only combined results will be reported; individual responses will be kept confidential.

1. Please fill out and return the enclosed postage paid **blue** postcard. If your facility also has a clinical nutrition manager, please give the separate letter and postcard (**gold**) to him/her to fill out.

If willing to participate, once the postcard has been returned:

2. You and your clinical nutrition manger will then promptly receive separate packets containing surveys and business reply envelopes for yourselves and those whom you directly supervise.
3. Distribute surveys.
4. Participants fill out the surveys and return them in the individual business reply envelopes provided. Surveys should take approximately 10 minutes to complete.

Please take a few minutes to fill out the postcard and return by **October 17, 2003**. The results of this study may shed light on aspects of management that have been largely unexamined. We appreciate your assistance and look forward to receiving your postcard.

Sincerely,

Anna Sarver
Graduate Student

Jennifer Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

**DIRECTOR OF FOOD AND
NUTRITION SERVICES SURVEY
PARTICIPATION POSTCARD**

Name: _____

Job Title: _____

Hospital: _____ **# Beds:** _____

Work Address: _____

City: _____ **State:** _____

Zip: _____ **Email:** _____

Are you willing to participate in this survey?

Yes No

(If yes, subsequent mailings will be sent directly to you.)

How many of each of the following do you directly supervise?

a. Foodservice managers/supervisors: _____

b. Clinical dietitians: _____ Diet techs: _____
(list only if they do **not** report to a clinical nutrition manager).

There is **not** a separate clinical nutrition manager at my facility.

Thank you for your response. Please fill out and return this postcard by October 17, 2003.

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PROVO, UTAH 84602-4602
(801) 422-3912 / FAX: (801) 422-0258



Clinical Nutrition Manager

October 2, 2003

Dear Clinical Nutrition Manager:

Management is a complex and challenging task. One aspect of management that has received quite a bit of recent attention in popular management literature is spirituality. However, little research has been done in this area. We are investigating the impact of religiosity/spirituality on workplace relationships of foodservice and nutrition managers and those whom they supervise.

Your hospital has been selected for participation in this study from the American Hospital Association database. Our study is designed for participation from the following:

- Directors of Food and Nutrition Services and those under their direct supervision. [i.e. foodservice managers/supervisors, dietitians, and diet techs (who do not report to a clinical nutrition manager)] and,
- Clinical Nutrition Managers (where applicable) and those directly under their supervision (i.e. dietitians, diet techs, etc.).

In order to obtain data representative of Directors in Food and Nutrition Services, Clinical Nutrition Managers, and their subordinates, we need your participation.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have questions about your rights as a participant, you may call Shane Schulthies, Chair of the IRB at (801) 422-5490. There are no known risks or discomforts associated with participation. Only combined results will be reported; individual responses will be kept confidential.

1. As clinical nutrition manager of your facility, please fill out and return the **gold** postcard.

If willing to participate, once the postcard has been returned:

2. You will then promptly receive a separate packet containing surveys and business reply envelopes for yourselves and those whom you directly supervise.
3. Distribute surveys.
4. Participants fill out the surveys and return them in the individual business reply envelopes provided. Surveys should take approximately 10 minutes to complete.

Please take a few minutes to fill out the postcard and return by **October 17, 2003**. The results of this study may shed light on aspects of management that have been largely unexamined. We appreciate your assistance and look forward to receiving your postcard.

Sincerely,

Anna Sarver
Graduate Student

Jennifer Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

**CLINICAL NUTRITION MANAGER
SURVEY PARTICIPATION
POSTCARD**

Name: _____
Job Title: _____
Hospital: _____ # Beds: _____
Work Address: _____
City: _____ State: _____
Zip: _____ Email: _____

Are you willing to participate in this survey?

Yes No

(If yes, subsequent mailings will be sent directly to you.)

How many of each of the following do you directly supervise?

- a. Dietitians: _____
- b. Diet Techs: _____
- c. Other(s): _____

Thank you for your response. Please fill out and

Appendix F: Distribution of Survey Questionnaires

- Cover letter for packet with questionnaires to Directors of Food and Nutrition Services (DFNS) explaining distribution process
- Cover letter for packet with questionnaires to Clinical Nutrition Managers (CNM) explaining distribution process

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PROVO, UTAH 84602-4602
(801) 422-3912 / FAX: (801) 422-0258



December 8, 2003

◇

Dear ◇:

Thank you for your willingness to participate in the religiosity/spirituality in management study we are conducting at Brigham Young University!

Enclosed you will find:

- One director/manager survey (cream) for you (if there is a clinical nutrition manager participating, a separate packet of surveys will be sent directly to him/her).
- Employee surveys (blue) for those whom you directly supervise [i.e. foodservice managers/supervisors, dietitians, and diet techs (who do not report to a clinical nutrition manager)]. Even though the clinical nutrition manager reports directly to you, he/she will not receive the blue employee survey from you.
- Postage-paid business reply envelopes for each individual survey.

Next:

- ◆ Complete the **cream** director/manager survey.
- ◆ Distribute the **blue** employee surveys with an envelope to those whom you directly supervise and ask for their participation.
- ◆ Upon completion, you and your employees can individually return the surveys in the postage-paid business reply envelopes by December 29, 2003.

Thank you for your support.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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December 8, 2003

◇

Dear ◇:

Thank you for your willingness to participate in the religiosity/spirituality in management study we are conducting at Brigham Young University!

Enclosed you will find:

- One director/manager survey (cream) for you.
- Employee surveys (blue) for those whom you directly supervise (i.e. dietitians, diet techs, etc.) Even if you report directly to the Director of Food and Nutrition Services, you will not be completing the blue employee survey in relation to your director.
- Postage-paid business reply envelopes for each individual survey.

Next:

- ◆ Complete the **cream** director/manager survey.
- ◆ Distribute the **blue** employee surveys with an envelope to those whom you directly supervise and ask for their participation.
- ◆ Upon completion, you and your employees can individually return the surveys in the postage-paid business reply envelopes by December 29, 2003.

Thank you for your support.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

Appendix G: Initial Follow-Up

- Follow-up letter for those facilities where managers had responded, but were missing some employees responses
- Follow-up letter for those facilities where neither manager or employees had responded

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December 1, 2003

◇

Dear ◇:

Thank you for your participation in the religiosity/spirituality in management study. We recently received your director/manager **cream** survey and appreciate your assistance. However, we are still missing some of the employee surveys from those you directly supervise. If they have sent the surveys, we extend our thanks, and ask that you disregard this letter.

If your direct subordinates have not yet responded, please remind and encourage them to take the time to complete and return the **blue** employee survey in the postage-paid business reply envelope by **December 17, 2003**. The surveys should take about ten minutes.

If the surveys have been misplaced or additional copies are needed, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676. Include the type (director/manager vs. employee) and number of surveys needed, and the surveys and additional business reply envelopes will be sent directly.

Because this survey is looking at the views and feelings of both directors/managers and their direct subordinates, participation by both groups is important to us. We appreciate your assistance and the assistance of your direct subordinates.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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December 1, 2003

◇

Dear ◇:

Recently we sent you a packet containing surveys for the religiosity/spirituality in management study. This packet should have contained a director/manager survey (cream) for yourself and employee surveys (blue) for those you directly supervise. So far we have had a good response rate. But, to date, we have not received surveys from yourself and/or your direct subordinates. If you and your subordinates have sent the surveys, we extend our thanks, and ask that you disregard this letter.

If you have not yet responded, we request that you complete the **cream** director/manager survey and distribute the **blue** employee surveys (with the included envelopes) to those whom you directly supervise and ask for their participation. The surveys should take about ten minutes, and upon completion, we ask that you and your employees individually return the surveys in the postage-paid reply envelope by **December 17, 2003**. If you have already distributed the employee surveys, please encourage your employees to take the time to complete and return the survey soon.

If you have misplaced the surveys or need additional copies for yourself or employees, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676. Include the type (director/manager vs. employee) and number of surveys needed, and the surveys and additional business reply envelopes will be sent directly.

Because this survey is looking at the views and feelings of both directors/managers and their direct subordinates, participation by both groups is important to us. We appreciate your assistance.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

Appendix H: Follow-Up #2

- Follow-up letter for managers who had responded, but none of their employees had
- Follow-up letter for employees at facilities where the manager had responded but none of their employees had
- Follow-up letters for managers at facilities where some employees had responded, but the manager had not
- Follow-up letters for employees at facilities where managers had responded, but were missing some employees responses
- Follow-up memo for those facilities where neither manager nor employees had responded

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January 16, 2004

◇

Dear ◇:

Thank you for your participation in the religiosity/spirituality in management study. We are excited about the good response rate we have received thus far. However, to effectively include all the data, we need a director/manager survey and at least one employee survey from each participating group. To date, our records show we have received your director/manager survey and thank you for your participation. However, we have not received any employee surveys from your facility.

We realize that you have probably already distributed the first mailing of the **blue** employee surveys to those you directly supervise and we thank you for your assistance. However, we request your assistance one more time in being the liaison between us and your employees as we have no way of directly contacting them. We have included letters to your employees and additional copies of the **blue** employee survey, and ask that you pass these on to those you directly supervise. We know that response is voluntary, but please encourage your employees to take about ten minutes to complete the survey and then return it as soon as possible in the provided postage-paid business reply envelopes.

If additional copies of the survey are needed or you have further questions regarding this study, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676.

Because the topic of this survey considers the views and feelings of both directors/ managers and their direct subordinates, individual participation is important to us. We appreciate your assistance in delivering the included letter and surveys to your direct subordinate, and look forward to their response.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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January 16, 2004

Dear Foodservice/Clinical Nutrition Team Member:

This past fall, we sent your manager a packet containing surveys for a study investigating religiosity/spirituality in the workplace and impact on leader/follower relationships. We are excited about the good response rate we have received thus far. However to effectively include all the data, we need at least one employee survey and a director/manager survey from each participating group. To date, our records show we have not received any employee surveys from your facility. If you have sent the survey, we extend our thanks, and ask that you disregard this letter.

If you have not yet responded or if this is your first time seeing the survey, we request your participation in completing the enclosed **blue** employee survey. Your response is, of course, voluntary, but we ask that you take about ten minutes to complete and return the survey in the provided postage-paid business reply envelopes as soon as possible.

If you have further questions regarding this study, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676.

Because the topic of this survey considers the views and feelings of both directors/ managers and their team members, individual participation is important to us. We appreciate your assistance, and look forward to your response.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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January 16, 2004

◇

Dear ◇:

Recently we sent you a packet containing surveys for the religiosity/spirituality in management study. We are excited about the good response rate we have received thus far. However to effectively include all the data, we need a director/manager survey and at least one employee survey from each participating group. To date, our records show we have received at least one employee survey from your facility, but we are still missing your director/manager survey and some of the employee surveys. If you have recently sent the director/manager survey, we extend our thanks.

If you have not yet responded, we again request your participation and have enclosed an additional copy of the **cream** director/manager survey. Please take about ten minutes to complete and return the survey in the provided postage-paid business reply envelope as soon as possible.

We realize that you already distributed the first mailing of **blue** employee surveys to those you directly supervise, and we thank you for your help. However, we request your assistance one more time in being the liaison between us and your employees as we have no way of directly contacting them. We have included letters to your employees and additional copies of the **blue** employee survey, and ask that you pass these on to those you directly supervise. We know that response is voluntary, but please encourage your employees to take about ten minutes to complete the survey and then return it as soon as possible in the provided postage-paid business reply envelopes.

If additional copies of the survey are needed or you have further questions regarding this study, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676.

Because the topic of this survey considers the views and feelings of both directors/ managers and their direct subordinates, individual participation is important to us. We appreciate your assistance, and look forward to your response.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

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January 16, 2003

Dear Foodservice/Clinical Nutrition Team Member:

This past fall, we sent your manager a packet containing surveys for a study investigating religiosity/spirituality in the workplace and impact on leader/follower relationships. We are excited about the good response rate we have received thus far. However to effectively include all the data, we need both employee and director/manager surveys from each participating group. To date, our records show we are still missing some of the employee surveys from your facility. If you have sent the survey, we extend our thanks, and ask that you disregard this letter.

If you have not yet responded or if this is your first time seeing the survey, we request your participation in completing the enclosed **blue** employee survey. Your response is, of course, voluntary, but we ask that you take about ten minutes to complete and return the survey in the provided postage-paid business reply envelopes as soon as possible.

If you have further questions regarding this study, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676.

Because the topic of this survey considers the views and feelings of both directors/ managers and their team members, individual participation is important to us. We appreciate your assistance, and look forward to your response.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD



Memo

To: Foodservice or Clinical Nutrition Director
From: Jennifer Oler and Anna Sarver
Date: January 22, 2004
Re: Religiosity/Spirituality in Management Study

Last fall you should have received a packet containing a director survey and several employee surveys in response to your willingness to participate in our religiosity/spirituality in management study. To date, our records show we have not yet received any surveys from your facility.

It is not too late! We have had great response, but would also like to include your facility and would appreciate your response to our questionnaire. If you are still willing to participate, please reply to this email. We just need the name of your hospital and we will send replacement surveys immediately.

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD

DEPARTMENT OF NUTRITION, DIETETICS, AND FOOD SCIENCE
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Appendix I: Follow-Up #3

- Follow-up letters for managers at facilities where at least one employee had responded, but the manager had not

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February 6, 2004

◇

Dear ◇:

*Roses are red
Violets are blue
If you fill out this survey
We'll stop bugging you!*

We wanted to thank you so much for your help in distributing the surveys for the religiosity/spirituality in management study to your employees. We have been excited about the number of responses we have received. To date, we have received at least one employee survey from your facility, but we are still missing your director/manager survey. If you have recently sent the director/manager survey, we extend our thanks.

If you have not yet responded, we again request your participation and have enclosed a copy of the **cream** director/manager survey. Please take a few minutes to complete and return the survey in the provided postage-paid business reply envelope as soon as possible.

If you have any questions regarding this study, please feel free to contact us through email at workplacesurvey@byu.edu or by phone at 801-422-6676.

We realize that you are a busy professional and really appreciate you taking the time to assist us in our research. Happy Valentine's Day!

Sincerely,

Anna N. Sarver
Graduate Student

Jennifer S. Oler, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD