Leadership Characteristics of Dietetic Professionals in Ohio

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ABSTRACT

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The field of dietetics, which has existed in the United States for under a century, faces the challenge of developing and using strong leadership in facing nutrition objectives (Erickson-Weerts, 1999; Calabro, Bright, & Bahl 2001). While the literature generally calls for further exploration of dietetic leadership issues, a notable lack of research compares leadership attributes of registered dietitians (RDs) of various specialties. To assess characteristics and factors of dietetic professionals and their leadership behaviors, a survey was mailed to 1000 Ohio dietitians. The survey's first three sections investigated demographics, dietetic specialty, and dietetic leadership, and the final component was the Leadership Practices Inventory, used with permission of the authors, Kouzes and Posner. With a response rate of 44.4%, the findings showed that many of the investigated factors—including dietetic specialty—significantly correlated with leadership practices of RDs.

Approved: _____

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I dedicate this thesis to my husband and our families, who have provided me with unwavering love and support well beyond measure, especially over the past year.

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CHAPTER 1: INTRODUCTION

Overview and Background

An increasing demand for strong leaders and effective leadership development is a problem being addressed by countless professional fields, and the field of dietetics is no exception. According to authors Barker, Foltz Arensberg, and Schiller (1992), “the cry for dietetics leadership has been heard for decades” (p.v). This “cry,” manifested through leadership-development initiatives and literature, generally calls for investigation of the issue for continued progress toward solutions (Arendt & Gregoire, 2005a; Arendt & Gregoire, 2005b; Calabro, Bright & Bahl, 2001; Derelian, 1995; Dodds & Polhamus, 1999; Foltz Arensberg, Schiller, Vivian, Johnson, and Strasser 1996; Gregoire & Arendt, 2004).

Perhaps as a result of changes in society, business practices, and professional fields, traditional leadership paradigms are no longer holding up (Lewis, 1987; Fullan, 1998). Thousands of pieces of published literature discuss the topic of leadership, including its new significance and its place in the future (Gregoire & Arendt, 2004).

The World Health Organization has included nutrition as a key component of health-priority areas in past objectives (Calabro et al., 2001). Because dietitians have the knowledge and skills necessary to address all of these areas of concern, leadership development in the field of dietetics is especially crucial (Huenemann, 1981).

Statement of the Problem

The field of dietetics, which has existed in the United States for under a century, faces the renewed challenge of developing and using strong leadership in facing nutrition objectives (Erickson-Weerts, 1999; Calabro et al., 2001). While the literature, in general, calls for further exploration of dietetic leadership issues, a notable lack of research compares leadership attributes of registered dietitians (RDs) of various specialties. Samples used in the variety of research articles reviewed included dietetic students, nutrition managers, clinical RDs, American Dietetic Association (ADA) members, dietetic academics and directors, dietetic committees, and dietetic practice groups, but there is yet to be any comparison research among the various subgroups (ADA Diversity Committee, 2000; Arendt & Gregoire, 2005; Bradley, Ebbs, Young & Martin, 1993; Calabro et al., 2001; Foltz Arensberg et al., 1996; Kwon, Gilmore, Oakland & Shelley, 2001; Mislevy, Schiller, Wolf & Finn, 2000). To address both the need for leadership development research and the apparent gap in published literature, this thesis research will explore the characteristics and leadership behaviors of dietitians, with a focus on possible relation to dietetic specialty.

Research Questions

This study was designed to allow for elucidation of many potential correlations and relationships among attributes, characteristics, and behaviors of the sample. By utilizing a survey (see Appendices A and B) that includes four sections—Demographics, Dietetic Specialty, Leadership Characteristics, and the Leadership Practices Inventory (Kouzes & Posner, 2003b)—the following questions provided the research framework:

(a) Are dietitians' demographics, dietetic specialty, and dietetic leadership characteristics

related in any way to their leadership practices? and (b) what trends exist between or among the dietetic subgroups? The hypothesis of this study was that leadership practices are significantly correlated with dietetic specialty.

Purpose/Significance of Study

The purpose of this study was to assess various factors associated with the leadership characteristics and practices of dietetic professionals in Ohio. Focusing on the relationship between dietetic specialty and leadership, the results helped to describe members of the dietetics profession. Groups of dietitians with strong leadership behaviors were identified, as well as those in need of further leadership development. Results allowed professional organizations, such as the ADA to most effectively address various subgroups. The ADA could, for example, design conferences and programs around the leadership style of the attendees. In addition, it could utilize the results when recruiting to fill vacant leadership positions. Individual dietetic professionals might refer to the results when making personal career decisions.

A research project specifically focusing on dietetic professionals' leadership characteristics was necessary to advance understanding of, and make improvements to, the dietetics community. The relevant dietetic literature has not investigated specific factors, such as dietetic specialty, and leadership skills of dietitians. No one has researched whether or not dietitians with similar leadership skills elect to work in the same segment of the dietetic profession. Because previous research has emphasized leadership as the most important skill required in the health care setting today and in the future (Adamson, Lincoln & Cant, 2000), the present study aimed to move the dietetics leadership in a new direction by contributing to understanding. Overall, this study helped

build the foundation for continued research regarding professional affiliation and leadership in the dietetics community.

Delimitations

Because this research included a mailed survey (Appendices A and B), certain parameters made the project feasible. One thousand subjects were randomly selected from a complete database of the 3,153 licensed registered dietitians (RD, LD) in Ohio. The Ohio Board of Dietetics (OBD) provided the public record database, and Microsoft Excel was utilized for the random selection process. Limited permit holders in Ohio were not included because the scope of this particular study included subjects remaining licensed for a substantial amount of time so that thoughtful responses could be made to the survey questions. Inherent in the survey method were the following delimitations: potential misinterpretation of survey questions and Likert scale, possibility of incomplete returned surveys, and unknown factors influencing participation or nonparticipation.

Limitations

Certain limitations regarding the survey design applied to this thesis research. First of all, participants could become fatigued while completing the somewhat lengthy questionnaire, which was four pages long with a total of 64 questions (see Appendices A and B for complete questionnaire). This fatigue could possibly have lead to subjects' expedited completions of the survey and hasty, thoughtless responses.

To minimize the length of the questionnaire, certain sections were written concisely, which might have lead to another limitation. Specifically, the questions regarding dietetic specialty included a condensed list of specialties from which the participant could select (Appendix A). Ideally this list of possible responses, which is

used for two questions, would be as specific as possible; however, such a detailed list might take up half a page of the questionnaire, increasing likelihood of participant fatigue. Although the condensing of the dietetic specialty list was done appropriately—for example, dietitians specializing in renal or cardiovascular dietetics would have the option of choosing “clinical/medical nutrition therapy”—this promoted individual interpretation of the dietetic specialty list. With each participant interpreting dietetic specialty in his or her own way, continuity of the subjects’ responses to these two questions might have been inhibited.

One method to avoid this limitation was considered, but not executed. To ensure that means for determining dietetic specialty was consistent among all participants, the questions soliciting specialty could have been linked to employment. For example, the question could have read, “In which area of dietetics are you currently employed?” rather than “In which area of dietetics do you primarily specialize?” The former confines the subject’s response to his or her job position rather than specialization. The latter, on the other hand, allowed the subject to most accurately report which segment of the dietetics community to which he or she primarily belongs. Because some dietetic professionals have felt locked-in to certain jobs or felt that their current areas of employment do not reflect their leadership skills and goals, it might not be appropriate to incorporate employment into the dietetic specialty questions (Dodd, 1999). Nonetheless, there seems to be a fine line between job position and specialization.

The results of this research could not necessarily be generalized to other populations of dietitians because this particular study was limited to registered dietitians licensed by the OBD. The demographic and dietetic specialty make-up of a sample of

dietitians in the Midwest might be different from that of samples of dietitians from Ohio or other regions of the country. For example, if the same study were replicated and in New York City or Los Angeles, perhaps there would be a larger amount of journalism or entrepreneurial dietitians with strong leadership practices. For this reason, the results of this study were limited to the respondents only, with the possibility of being generalized to the entire population of RDs licensed in Ohio, but not the entire nation.

Definition of Terms

As simple as the term “leadership” might seem, a variety of definitions and theories have appeared in the literature. According to Gregoire and Arendt (2004), a clear definition of leadership “remains somewhat elusive” (p. 395). Certain business literature explains leadership as a process where leaders influence attitudes, behaviors, and values of others (Vecchio, 1995). Kouzes and Posner (2003a), authors of the standardized instrument used for this research, believe leadership to be “a reciprocal relationship between those who choose to lead and those who decide to follow,” (Dansey-Smith, 2004, p. 28). The ADA has defined leadership as “the ability to inspire and guide others toward building and achieving a shared vision” (Borra & Kunkel, 2002, p. 12). While investigating leadership, it is also important to differentiate leadership from management. Management means coping with complexity of an organization and bringing “a degree of order and consistency to key dimensions” (Kotter, 2001, p. 86).

Organization of Thesis

This thesis research—which was classified as exempt by Ohio University Institutional Review Board—began Fall 2006 when 1000 potential participants were randomly selected from the population of over 3000 RDs licensed in Ohio. The sample

was sent a mailing including the following materials: a one-page cover letter explaining the purpose of the research and that a reply represented implied consent; a double-sided two-page questionnaire including 64 questions, and a business reply envelope. A deadline for submission of completed surveys was set for the participants. Data was entered into the Statistical Package for Social Sciences, version 15, over the months of November and December 2007, leaving the months of January and February 2008 for data analysis and consideration of results.

CHAPTER 2: CRITICAL REVIEW OF LITERATURE

For decades the field of dietetics has been in need of stronger leadership practices, reflecting the similar demand for leadership of our society as a whole (Barker et al., 1992). Further, no studies comparing multiple factors and leadership practices of dietitians exist.

Although the beginning of the leadership phenomenon itself cannot be traced to a certain period of time, the systematic social research of leadership started in the 1930s (House & Aditya, 1997). The most effective way of reviewing this literature is to do so by first investigating the business leadership literature and then considering leadership in the dietetics literature.

Business Leadership Literature

Defining Leadership

What does it mean to be a leader? This seemingly simple question has grown in complexity over the years, as indicated by the abundance of literature relating to the topic. The time has come to recognize that a person in position of power and authority does not automatically make anyone a leader and that a distinction must be made between simply running an organization and leading an organization (Greger & Peterson, 2000).

Extensive leadership literature in the field of business provides numerous definitions of what it means to be a leader. In the most basic sense, leadership means “to show the way; to guide; to direct; to persuade; to precede” (Greger and Peterson, 2000, p. 16). Considering the word as an action, leading can be thought of as the use of non-coercive influence, shaping a group’s goals, motivating desirable behaviors, and helping to define an organization’s culture (Griffin, 2002). Leadership authorities Kouzes and

Posner (2003b) believe that leadership is a reciprocal relationship between those who chose to lead and those who choose to follow. This interpretation implies that a leader will be accepted only if he or she acts in a way in which the people believe a leader should act (Dansey-Smith, 2004). Instead of simply applying tools and techniques toward managing an organization, leadership involves integration of vision and values (Mohr, Abelson, Barach, 2002). Further, it is about motivating and engaging members to work toward the common goal (Pennington, 2003).

Authors Greger and Peterson referred to a symphony conductor as a simile for a true leader. They noted that rarely do conductors play each and every instrument, but instead they keep all of the musicians on the same page of music while keeping a keen ear out for the overall piece. The same is true, then, for the leader of a professional organization. It takes key coordination of team members and keeping on track towards the shared vision. (Greger & Peterson, 2000). A unified harmony of leadership is more powerful than a group of individual leaders (McMahon, 2003).

Vision

In their Leadership Practices Inventory (LPI), Kouzes and Posner describe what they have determined The Five Practices of Exemplary Leadership. Inspiring a Shared Vision, the second practice of effective leaders, means recognizing that a vision, or ultimate goal, cannot be realized by the leader alone. Instead, the leader must appeal to the shared aspirations of a group's members. (Kouzes and Posner, 2003). Former president and Chief Executive Officer (CEO) of Creative Healthcare Management, Minneapolis Marie Manthey agrees that visioning and direction-setting are skills managers need to learn in order to become effective leaders (Manthey, 2002). Mohr et al.

also recognize the importance of integrating vision into leadership development (Mohr et al., 2002).

Just as it is key for a good leader to have a solid vision for the future, it is also necessary to consider reevaluation as the process is carried out. An effective leader has the ability to take a step back and reconsider the direction of the original vision keeping in mind any outdated conditions or new circumstances. Such a person does not feel threatened when members of his or her group question the original vision, because that leader knows that a revisioning might be necessary for success. The validity of an organization's ultimate goal must be routinely checked so that the group can stay on track. It is the job of the leader to keep his eyes on the road to assess what is actually taking place rather than what was originally planned (Greger & Peterson, 2000).

Leadership and Management

“Leadership has replaced management as the key to corporate operations” according to Fisher (2001, p. 25), and some believe that today's associations and corporations are relatively under-led and over-managed (Hagen, 1998; Kotter, 2001). For these reasons, it is crucial to differentiate between management and leadership.

Management is about bringing a degree of order and consistency to an organization and effectively handling complexity or chaos. Leadership, on the other hand, is about coping with change while taking the long-term effects into consideration (Kotter, 2001). While both actions involve seeing a group of people through an activity, event, or process, each one does so in a very different way. Management entails planning, budgeting, organizing, staffing, controlling, and problem solving. Leading means setting a direction, aligning people, motivating, and inspiring (Kotter, 2001).

According to Dansey-Smith (2004), “leadership is more about who you are and management is about what you do” (p. 28). In any case, both ends of the spectrum need to be embraced (Dansey-Smith, 2004).

Leadership Styles

A 2003 study by the Hay Group compared the strengths and weaknesses of several groups of leaders and investigated the six approaches or styles of leadership. The authors wanted to know which types of leaders effectively inspire and how might one go about defining and measuring these types of leaders so that further leadership development can occur. The Hay Group utilized a measurable model of leadership to look at leaders in various colleges, and began to compare the strengths and weaknesses of four groups. Pennington, an author associated with the Hay Group, explained that a leadership style comes about when a leader faces a specific situation and practices a set of behaviors in reaction to the distinct circumstances at hand. (Pennington, 2003)

The Hay Group recognized the six generally accepted leadership styles that seem to widely cover the most common ranges of behaviors: coercive, authoritative, affiliative, democratic, pacesetting, and coaching. Coercive leadership can be characterized by the phrase *you must do this now*, and authoritative leaders suggest *this is where we are going and why*. Affiliative leaders feel the importance of everyone getting along, democratic leaders invite the views of their subordinates, and pacesetting leaders declare *this is the only way to do it*. Finally, a coaching style of leading maintains the position *how can I support your learning?* (Pennington, 2003).

There is a reoccurring theme throughout the literature supportive of the notion that no one leadership style is better than the rest. Effective leaders are flexible and are

able to adopt a combination of the six leadership styles, depending upon the situation and people involved (Pennington, 2003). It has been found, however, that most leaders are comfortable with one or two leadership styles. During times of stress or chaos, they rely heavily on the styles with which they are comfortable, regardless of which style or combination of styles would fit the situation at hand (Pennington, 2003).

Carmel Byrne is an executive coach and partner of Blue Chip Coaching, an organization providing executive and leadership coaching services, and she explained that not all styles are useful in all situations. Those who can flexibly use a range of leadership styles per the occasion are generally the most effective leaders. By evaluating the specific people involved and situation itself, these leaders have the ability to overcome the convenience of relying upon their dominant styles. Instead, effective leaders use a style that caters to the current circumstance (Byrne, 2005).

Another way of considering different leadership styles is called situational leadership. This approach states that “appropriate forms of leadership behavior are not universally applicable,” and one must attempt to specify situations in which various behaviors are appropriate (Griffin, 2002, n.p.).

Leadership Development

Literature over the past 30 years has investigated and discussed the perpetual question *Are leaders born or made?* Substantial research has shown that the latter is true, and that inherited charisma has nothing to do with leadership (Kotter, 2001). In fact, charisma may actually get in the way of successful leadership. Instead, leadership is a set of skills that can be learned, mastered, and then incorporated into positively affecting an organization (Manthey, 2002).

A study conducted at the University of Chicago Center for Psychiatric Rehabilitation investigated this idea that leadership is not necessarily inborn, but can be developed. Twenty-seven leaders of rehabilitation teams attended a daylong leadership seminar, and completed pre- and post-tests using the Multifactor Leadership Questionnaire (MLQ). One of the most important findings was that a short course in appropriate leadership skills can improve participants' approaches towards leadership. The authors suggested that teamwork and leadership are necessary in the success of certain services, such as rehabilitation. (Corrigan, Lickey, Campion, & Rashid, 2000).

Anyone can choose to be a leader and develop the relevant beliefs, attitudes, and behaviors, according to The Campaign for Leadership, a foundation working to develop young professional leaders. Dansey-Smith (2004), learning and development consultant with The Campaign, develops leadership development programs and explained that the first step of leadership development is personal awareness. The tool that helped her participants achieve self-awareness consisted of leadership competencies that embody these attitudes and behaviors:

Liberate. Give others the freedom to make their own decisions. Encourage.

Motivate and encourage teams, support where necessary. Achieve. Achieve the objectives of the team and the organization. Develop. Develop individuals and teams. Example. Set an example through their own behavior. Relationship.

Build effective relationships based on trust. (Dansey-Smith, 2004, p. 29).

A Need for Leadership Development

Much of the business literature expressed the need for developing effective leaders, for a variety of reasons. Fisher believes that a trend of self-centered

individualism has fueled the need for reprogramming leaders of the 21st century.

According to this author, professionals in leadership positions are distracted by the glamour of increased salary, benefits, and privileges. It is necessary for these professional leaders to reevaluate their practices for the survival of their respective industries (Fisher, 2001).

Barron (2004) said that development of successful leaders is crucial in an era when businesses are faced with opportunities and obstacles causing frequent changes of course. For an organization to provide exceptional services to clients, members must work well together, and the research shows that members are more able to form a cohesive unit when they are led by a competent leader (Corrigan, 2000).

The need for leadership development is evident within all different segments of the business community, especially because traditional leadership paradigms are no longer meeting the requirements of modern-day society (Lewis, 1987; Fullan, 1998). Educational administrators and education-related organizations are being encouraged to improve educational leadership to promote more productive schools (Boeckmann & Dickinson, 2001). Authors Boeckmann and Dickenson—intermediate school administrator and professor of education administration, respectively—suggested that leaders in their field collaborate to develop leadership preparation programs (Boeckmann & Dickinson, 2001).

Leadership has become a key theme in healthcare management as well, a field in which leaders must create a learning organization, while integrating a vision of safety (Mohr et al., 2002). In this field of medicine, mistakes occur all over and they are often publicly recognized (Wachter, 2002; Chassin & Becher, 2002). It is important when

training patient safety leaders to consider the wide array of factors that influence a healthcare professional's interaction with a patient (Millenson, 2002). The need to develop leaders within health care must be supported by programs that include the following aspects suggested by authors Mohr and colleagues: management, human factors engineering, safety, measurement and data systems, education and socialization of health care professions, improvement methods, systems theory, crisis management, safety culture and team training. The authors also believe that governing boards are integral in promoting patient safety, and further leadership development of health care professionals to promote maintenance of patient safety results from access to and interaction with experienced leaders. (Mohr et al., 2002).

Within the health care field, nursing specifically has reported a shortage of professional leaders and the need for nurse leaders to exhibit care and understanding so that such tendencies can be reflected in patient care (O'Connor & Walker, 2003). Leadership development of nurses requires both personal and professional devotion to the process, which is not about particular courses or strategies, but attention, care, and experiences (Wright, 1996). As a method to enhancing leadership development within this field, nurse executives, managers, consultants, educators, and entrepreneurs from across the country participate in the annual Center for Nursing Leadership's (CNL) Journey Toward Mastery program, a five-day leadership experience (O'Connor & Walker, 2003).

The business administration field is being challenged to promote strategic leadership development and practice, which involves a leader's ability to anticipate, brainstorm, be flexible, and empower others to create strategic change (O'Reilly, 1994;

Byrd, 1987). One study that surveyed CEOs from companies around the United States concluded that development of human capital and determining strategic direction are among the most critical components of the corporate strategic leadership (Hage, Hassan, & Amin, 1998).

Applications

The aforementioned Hay Group study made several strong conclusions that can be applied to organizations outside of the business field, such as dietetics. For one, proper leadership can help any organization overcome such success barriers as initiative overload and low esteem. Also, the study maintained that successful leadership requires personal assurance and self-awareness as much as it is dependent upon resources, constraints and cultural factors. Flexibility and adaptability are essential for any leader to contribute to an organization's success (Pennington, 2003).

Dietetics Leadership Literature

A limited amount of dietetics leadership literature has been published. Of the available research, many articles reflect themes similar to the business literature (Gregoire & Arendt, 2004). Despite the particular angle of each study or article, most reinforced the need for leadership in dietetics today (Barker et al., 1994; Pace, 1995; Edge, 2004; Foltz Arensberg, 1996; Gregoire & Arendt, 2004; Scott, 2005).

Defining Leadership

Authors Gregoire and Arendt (2004) acknowledged that a great number of leadership definitions have been published, and one common definition is indistinguishable. Creating an unwavering basis for organizational improvement, the ADA has defined leadership as “the ability to inspire and guide others toward building

and achieving a shared vision,” and the ADA has declared its commitment to the advancement of leadership development (Gregoire & Arendt, 2004, p. 395). Other dietetic researchers agree with the ADA’s definition, affirming that such visionary leadership inspires others to become excited about the leader’s goals, all the while strengthening the organization as a whole (Arensberg et al., 1996).

Other dietetic literature has defined a specific type of leadership, transformational leadership, as a compilation of various interacting factors: personal characteristics of the leader and situational contexts in which leaders and followers interact (Arensberg et al., 1996). One study found that a sample of dietitian members of the Clinical Nutrition Management practice group of the ADA significantly exhibited transformational leadership (Arensberg et al., 1996).

Leadership Styles and Approaches

Just as certain business literature authors identified various styles of leaders, Barker et al. defined three assorted leadership approaches, placed on a continuum. At one end is an autocratic style, which means directive, high degree of control, and allowing no subordinate participation during decision-making. A laissez-faire leader, on the opposite side of the spectrum, holds no restrictions whatsoever upon his or her followers, and also does not provide direction. Between these extremes of passive and aggressive leadership styles is the democratic leader who actively stimulates the group while maintaining a low degree of control (Barker et al., 1994).

Author Judith Dodd pointed out, on the other hand, that “no single or preferred leadership style” is appropriate for every leader in every situation (Dodd, 1999, p. 424).

Gregoire and Arendt concisely outlined the various approaches to leadership in their article *Leadership: Reflections over the Past 100 Years*. The five categories summarized included trait, behavior, power/influence, contingency/situational, and reciprocal (Gregoire & Arendt, 2004). The trait approach identifies the five personality characteristics of leaders as surgency, conscientiousness, agreeableness, adjustment, and intelligence (Digman, 1990; Goodstein, 1999). Behavioral leadership studies simultaneously conducted at the University of Michigan and The Ohio State University suggested that leadership practices can be categorized based on human interaction or on the task being carried out by the leader (Gregoire & Arendt, 2004). Leadership can also be studied based upon leadership effectiveness with regards to type and amount of power held by a leader (Gregoire & Arendt, 2004). Situational leadership considers all aspects related to a given situation, including the people involved and current circumstances (Tannenbaum & Schmidt, 1958). Reciprocal approaches to leadership investigate the emotional relationship and interaction between a leader and his or her followers (Gregoire and Arendt, 2004).

Leadership and Dietetics

The healthcare field is constantly changing and evolving, and as we begin a new era, it is essential that strong leaders in the field of dietetics step forward. Modern challenges require public health nutritionists to possess well developed managerial and leadership skills. Overall, dietitians must be “bold visionaries, adept managers, sensitive politicians, and above all, effective communicators” (Dodds & Polhamus, 1999, p. 812).

Barker et al. (1994) thoroughly discussed various topics within the area of leadership in dietetics, including the need for a new theory, societal and healthcare

transformations, organizational change and vision, self-esteem, decision-making, time-management and teamwork. The authors described a concern for leadership within society as a whole, citing three main problems: increased complexity, lack of commitment, and decreased faith in leaders. They reiterated that organizational success directly reflects how well or poorly the leader performs. One possible underlying reason for the lacking leadership might be attributed to issues of job satisfaction and salaries. (Barker et al., 1994)

The authors continued by looking toward the future of dietetics. Predicting positive changes, they stated that dietitians will become empowered innovatively and creatively, which could lead to an increased profit for the ADA (Barker et al., 1994). Confidence and energy are common characteristics amongst dietetic professionals; however, many dietitians also possess a certain self-defeating characteristic. For this reason, they need to practice affirmations, visualizations, and harnessing of mental power, according to the authors (Barker et al., 1994).

One particular study investigating maternal and child health nutrition training reported that specialized, intensive training in the nutrition field develops and supports leadership skills. The authors of this research encouraged practitioners to apply the findings toward the utilization of leadership skills on clinical, academic, and administrative levels (Letos, Trahms, Lucas & Powell, 2001).

Some literature has compared dietitians' habits to Steven R. Covey's *The Seven Habits of Highly Effective People*. The very small sample of ADA Foundation Excellence in Practice award winners showed habits consistent with those delineated by Covey (Rhoades & Dix, 1996). Leaders exhibiting the Seven Habits are successful at

attending to short-term responsibilities while maintaining relationships and skills required to make it to the long-term goal (Covey, 1989).

Recommendations of another study urge dietitians to increase leadership and involvement to meet the global health concerns outlined by the World Health Organization and to enhance dietitians' role in the nation's nutrition policies (Calabro et al., 2001). It has also been documented that dietitians play a major leadership role—as educators, advocates, and advocates for lifestyle change—regarding women's health (Fahm & Jocelyn, 1998).

Leadership Development

In 2003, the American Dietetic Association announced its plans to develop a leadership-building initiative called the American Dietetic Association Leadership Institute, which was approved by the Board of Directors' Program of Work. The first session was held in Tucson, Arizona in February 2004 with the following objectives: (a) enhance ADA members' potential to be leaders in their workplaces, (b) provide educational opportunities to improve leadership effectiveness in the field of dietetics, (c) expand the leadership base of the profession, (d) identify and empower emerging leaders, (e) identify resources and develop programs in leadership development, (f) assist members in handling change in their environments, (g) build skills for all ADA members to be leaders, (h) enhance the future of dietetics, and (i) establish a new, broad certificate program (Smith Edge, 2003). Three successful sessions—in 2004, 2005, and 2006—have taken place with nearly 250 participants attending the most recent one. Several facilitators and speakers made the event possible, lecturing on topics such as governance and *self as leader* (Smith Edge, 2003). The Association's overall goal was to enhance

dietetic professionals' leadership competencies, both conceptually and interpersonally (Laramee, 2005).

Dr. Gervase Bushe, speaker at multiple ADA Leadership Institute sessions, explained methods of developing what she calls appreciative leadership: focusing on solutions rather than on problems. Bushe (2005) encouraged leaders to inspire vision by “touching people’s imagination, aspirations and spirit” (p.699). An appreciative mindset, she reminded, is not something that can be developed in a short period of time. Instead, it is a life-long journey during which you learn how to naturally focus on what is right rather than what is not going right (Bushe, 2005).

Applications and Warranted Research

Common throughout the majority of the dietetic leadership literature was the recommendation for continued research on the topic. New studies are warranted to further examine the role of transformational leadership in dietetics, and to define delineating factors to this leadership style. In addition, it has been recommended that dietitians develop programs that promote reorganization of professional, dietetic environments to promote transformational leadership (Arensberg et al., 1996).

The profession of dietetics is in need of leaders. More research is necessary to determine effective training methods for fostering dietitians' leadership skills, which will bring about their assumption of leadership positions (Gregoire & Arendt, 2004). One strategy suggested is to identify ways of helping dietitians enhance their learning and leadership abilities by reflecting upon their own experiences with leadership. Another fairly simple recommendation is to showcase strong leaders at national ADA meetings (Gregoire & Arendt, 2004).

Upon concluding that classroom activities may help strengthen leadership abilities of college nutrition students, Arendt and Gregoire advised educators to explore various ways of integrating leadership into the classroom. Educators should “assist students in identifying current leadership behaviors and encourage the practice of new leadership behaviors,” (Arendt & Gregoire, 2005a, p. 1293). The authors also concluded that a reliable instrument measuring the leadership of dietetics students and professionals needs to be developed and implemented.

The Community of Dietetic Professionals

Demographics

Caucasian women have comprised the majority of the dietetic profession since the field came to be, and in 1997 the following composition of American dietitians was reported: 2.5 % Black, 1.7 % Hispanic, 4.8 % Asian or Pacific Islanders, 0.2 % Native American, and 2.4 % men (Bryk & Soto, 1999). The combined percentage of these racial and ethnic segments of U.S. dietitians, 9.2 %, does not come close to adequately representing the percentage of minorities of the U.S. population, which a Healthy People 2010 report cited as 25% (US Department of Health and Human Services, 2005).

In response to these observations, the ADA Diversity Committee has worked towards the development of the Minority Recruitment and Retention Research Project. The initiative launched its strategic plan in 1999 with several goals and both short-term and long-term diversity action plans. Action plans included leader skill development and mentoring, publicity activities, ADA minority recruitment campaign, and dietetics education program initiatives. The following goals were set for the ADA membership for the improvement of the profession and its diversity: be the leader in selected areas of

food and nutrition, build membership in the ADA, increase demand and utilization of services provided by ADA members, and position members to compete successfully in a rapidly changing environment (ADA Diversity Committee, 2000).

Dietetic Specialty

Since the beginning of the dietetic profession, it has been customary for dietitians to work in healthcare facilities, such as hospitals and assisted living facilities. These job positions requiring both clinical and managerial tasks, however, have become available to dietetic technicians, registered (DTR) and certified nutrition managers (O'Sullivan Maillet, 1991). This shift of career opportunity has encouraged dietitians to seek new arenas in which to utilize their licensure, skills, and knowledge (Peterson, Albers, Mertz & McCoy, 1999). As a result, RDs have expanded upon the traditional idea of what it means to be a dietitian by securing job positions as businesspeople, spokespersons, entrepreneurs, publishers, legislators, and private practice owners (Dodd, 1999).

International Perspective

In the United States, the dietetic profession has existed for fewer than 100 years, demonstrating its relative youth compared to long-established fields such as medicine and law (Moore, 1970). On a global level, the dietetics profession is either non-existent or extremely new (Calabro et al., 2001). Nutrition leaders from various countries have formed organizations, such as the International Congress of Dietetics and the International Union of Nutrition Sciences to address this problem (Calabro et al., 2001).

While the dietetics profession is still in the process of spanning the world, the World Health Organization (WHO) has reinforced the importance of trained dietitians in helping solve international nutrition crises. Three out of eight of the WHO's health-

priority areas from 2002-2003 were related to nutrition: maternal health, cardiovascular disease and diabetes, and food safety (Calabro et al., 2001). Dietitians have the ability to initiate and carry out nutrition interventions demanded worldwide (Huenemann, 1981).

Women and Leadership

Because the majority of dietetic professionals is comprised of women, perhaps leadership trends within the field of dietetics are reflective of general trends of women and leadership (Dodd, 1999). Calabro et al. (2001) cited gender inequality as a barrier to practicing dietetics internationally, with a strong limitation on the status of dietitians in a male-dominated world. Because dietetics originated from home economics, dietitians have been commonly regarded as hospital foodservice managers rather than highly trained and educated healthcare professionals (Erickson-Weerts, 1999).

Globally and historically, women have had less opportunity to serve as leaders than men. The moment the 1787 Constitution and Bill of Rights were completed and signed, women were prevented true, lawful equality in the United States. Although these documents did not specifically deny equal rights, the exclusion of “women” from the text signified a culture intolerant of women in leadership (Hoff-Wilson, 1987). As the American society gradually sought rectification of this historic blunder, the movement of women into leadership took many titles: *women and development* in the 1960s, *gender and development* in the 1970s, and then *women’s human rights* in the 1990s (Snyder, 2003). Some authors are now calling it the unfinished revolution as a reminder that feminization of society is still a work in progress (Hoff-Wilson, 1987; Snyder, 2003).

Despite lack of opportunity and access to higher education throughout history, women have become increasingly integral partners in the healthcare field. When women

were barred from medical schools in the 19th century, many excelled in the field of nursing and even nutrition. Before long, leaders and organizations established women's studies programs nationwide. This progress resulting from the tireless endeavors of past leaders must be sustained and expanded by today's dietetic professionals (Calvert, 1997).

In their article *The Feminization of Leadership*, authors Smith and Smits (1994) described the emerging trend of strong leaders exhibiting characteristics commonly associated with women—helping subordinates, cooperating with peers, and nurturing a sense of family in the workplace. They also explained that in their previous research, they did not find a significant difference in personality characteristics and leadership practices between male and female business owners. Ultimately, the authors encouraged, the goal is to “encourage ‘feminine’ styles of leadership, not to replace, but to balance ‘masculine’ styles” (Smith & Smits, 1994, p. 46).

CHAPTER 3: METHODOLOGY

Subjects

One thousand potential participants were randomly selected from a population of 3,162 registered dietitians (RDs) licensed in Ohio. In response to a written request for the information, the Ohio Board of Dietetics (OBD) provided a public-record database of the population. Microsoft Excel was used to carry out the random selection process.

Data Collection

A descriptive research design was utilized to assess characteristics and factors of dietetic professionals and their leadership behaviors. Parts 1 through 3 of the survey included 34 questions pertaining to demographics, dietetic specialty, and dietetic leadership, respectively (Appendix A). A standardized tool developed by Kouzes and Posner (2003b), called the Leadership Practices Inventory (LPI) was the final of the survey's four parts to evaluate subjects' leadership behavior (Appendix B). Altogether, the survey was two double-sided pages in length.

The instrument, along with a cover letter and business reply envelope, was mailed to the 1000 potential participants. Participants were allowed two weeks to complete and return the survey. Once all of the completed surveys had been received, data was analyzed using the Statistical Package for the Social Sciences (SPSS Inc., 2006) version 15.0.

Survey Instruments

Dietetic Professional Survey

As mentioned above, parts 1 through 3 of the mailed survey asked questions related to demographics, dietetic specialty, and dietetic leadership, respectively

(Appendix A). The thesis committee and primary researcher collaborated to develop this questionnaire, based upon the review of literature and the committee members' experience in the field. Its purpose was to elucidate any possible correlations between these factors and the leadership behaviors described in the part 4, the LPI (Appendix B). Despite the questionnaire's inclusion of sections on three different topics, it was designed to promote a continuous flow. Rather than having subheadings separating the three sections, the questionnaire had the simple title "Dietetic Professional Survey" with the questions numbered 1 through 34.

The first 11 questions of the survey asked participants to describe their demographical information, including sex, age, race/ethnicity, marital status, and educational degrees earned. In addition, this section investigated factors related to employment in the dietetics field: title, years practicing dietetics, employment status, and membership in the ADA.

Questions 12 through 16 asked participants to choose the dietetic specialty in which they primarily specialized. The options were business/entrepreneurial, clinical/medical nutrition therapy, counseling, communication/journalism, education, food/culinary, public health/community nutrition, research, school nutrition service, and other. Participants also had the opportunity in this section to express any intention they might have to change dietetic specialty in the future and provide the reason for such a change.

Before the third section of the questionnaire was a note reading "Please answer the following questions based on your experience outside of employment, since college." The purpose of this statement was for the researchers to gain a clear picture of the

sample's leadership experience since entering the professional field of dietetics as registered dietitians. Many of the questions in this section related to participation in dietetic organizations and meetings and factors possibly influencing such participation. Participants were asked whether or not the ADA professional development portfolio guidelines had impacted their leadership decisions. The ADA Leadership Institute was also mentioned through questions related to awareness and attendance of the Institute.

Leadership Practices Inventory (LPI)

Kouzes and Posner (2003b) developed the widely used Leadership Practices Inventory (LPI), a standardized assessment tool based on what they call The Five Practices of Exemplary Leadership. The Five Practices rest on the principle that certain behaviors are common to successful leaders' personal-best leadership experiences. Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart individually describe what it means to behave as a strong leader (Kouzes & Posner, 2002).

First of the practices outlined by the authors is Model the Way. Leaders who model set a positive example by matching their own actions to their words. They set an example for the other group members through daily actions, demonstrating devotion to personal and group values. Kouzes and Posner (2002) believed credibility to be the basis for strong leadership, and the leaders they had researched earned the right and respect to lead because of their direct participation and action. Leaders exhibiting this sort of behavior must be careful to clarify their own values without forcing them onto others (Kouzes & Posner, 2002). Statements within the LPI designed to reveal Model the Way

practices of the participant might be worded as such: *I set personal examples of what I expect from others* or *I follow through with my promises*.

Inspire a Shared Vision means appealing to a group's shared aspirations to enlist others into the leader's dream. According to the LPI authors, "every organization, every social movement, begins with a dream...vision is the force that invents the future" (Kouzes & Posner, 2002, p. 15.) Understanding that the leader alone cannot fulfill a vision is important in inspiring a shared vision. Rather, the leader must help the others to realize the possibilities of their vision, and that teamwork will bring about the sought-after success (Kouzes & Posner, 2002). Inspire a Shared Vision is included in statements such as *I paint a big picture of what we aspire to do* in the LPI.

Third of the Five Practices is Challenge the Process, which entails working through obstacles for the execution of a vision. This usually means seeking innovative ways to change, grow, and improve while on track towards the shared vision. To effectively exhibit this behavior, a leader needs to help his or her organization experiment and take risks to overcome inevitable opposition and setbacks along the way. Kouzes and Posner (2002) believe that strong, effective leaders seek and accept challenge because it means constantly striving for the best. Participants of the LPI must consider the following Challenge the Process statement, among others: *I ask, what can we learn from these mistakes?*

The fourth principle, Enable Others to Act, involves leaders helping others feel confident as well as competent. This practice requires trust amongst team members, possible only when the leaders share power and provide choice. In doing so, they foster collaboration so that everyone who is involved with the project becomes engaged and

vital to the overall success. In the many cases that Kouzes and Posner qualitatively studied, leaders took pride in their organizations' teamwork, trust, and empowerment. Along the way, this practice encourages constituents to become leaders as well (Kouzes & Posner, 2002). *I actively listen to different points of view* is an LPI statement identifying leaders exhibiting Enable Others to Act.

Finally, exemplary leadership involves Encourage the Heart, a practice based on the spirit of community. Leaders encouraging the heart keep everyone on the same page and keep the fire alive. While frustration and exhaustion might flood the path towards a shared vision, a leader practicing this behavior clears the way by helping others keep determination alive. When group members become disenchanted, disengaged, or disorganized, the leader “uplifts the spirits and draws people forward” (Kouzes & Posner, 2002, p. 19). Leaders who Encourage the Heart of their group might strongly agree with the LPI statement, *I publicly recognize people for exemplary behavior and accomplishments*.

To create the Leadership Practices Inventory, Kouzes and Posner's wrote a series of behavioral statements describing actions of a leader would take when adhering to each of The Five Practices of Exemplary Leadership. The final LPI consisted of thirty statements—six behavioral statements for each of the Five Practices (Appendix B). LPI participants use a ten-point Likert scale indicating how frequently the leader engages in the behavior described. The higher the value, the more frequent the use of a behavior. This standardized tool is one of the most widely used leadership assessment instruments available and has stood the test of time regarding reliability and validity (Kouzes and

Posner, 2003). The LPI has also been used in multiple studies published in dietetics literature (Arendt & Gregoire, 2005a; Arendt & Gregoire, 2005b).

Statistical Analysis

Once all of the completed surveys were received, each one was assigned a random number for coding and analytical purposes. The raw data was then entered into version 15.0 of the Statistical Package for Social Sciences (SPSS). Frequency, ANOVA, T-test, and Pearson's Chi-square tests were all utilized to reveal any possible relationships between and among the various factors investigated with the survey. LPI Scoring Software, 3.0 was used to interpret the sample's leadership scores (Kouzes & Posner, 2003b).

CHAPTER 4: RESULTS

Description of Sample

Upon receiving all returned surveys, 444 completed ones were entered into SPSS version 15.0 for data analysis (SPSS, Inc., 2006). Participants were primarily female (97.1%), white (98.2%), and employed (93%). All were registered dietitians.

The two most common age ranges were 45-49 years (17.9%) and 50-54 years (17.2%), while 46% of the sample was age 44 or younger. Most participants (77%) were married. Dietitians who had worked in the field for more than 15 years comprised 58.9% of the sample, and 15.8% was composed of those who had been working in dietetics for 1-5 years. The remaining quarter of the sample had worked between 6 and 15 years, with less than 1% having under a year's experience in dietetics. The highest college degrees achieved were as follows: Bachelor's (55.5%), Master's (42.2 %), multiple Master's (1.1%), and Doctorate (1.1%).

When asked of primary dietetic specialty, the predominant responses were Clinical/MNT (52.7%) and Public Health/Community Nutrition (17%). The remaining 20% consisted of dietitians specializing in Education, Business/Entrepreneurial Food/Culinary, Research, Communication/Journalism, and School Nutrition Service, with a portion of the dietitians (13.1%) offering write-in responses to the question. Of the latter, 2% described themselves as Long Term Care specialists. Many (67.4%) were members of the ADA. (See Figure 1.)

Figure 1. Dietetic specialties of registered dietitians in sample.

Dietitians demonstrated moderate leadership tendencies through its LPI scores, according to the LPI Scoring Software 3.0 (Kouzes & Posner, 2003b). With a highest possible score of 60, the following means describe the five leadership practices of our sample as a whole (See Figure 2): Model the Way (Model), 47.18; Inspire a Shared Vision (Inspire), 41.00; Challenge the Process (Challenge), 42.55; Enable Others to Act (Enable), 49.75; and Encourage the Heart (Encourage), 47.35. As indicated by the software, Ohio dietitians in this study scored between the 30th and 79th percentiles, compared to thousands of others who have taken the same LPI version (Kouzes & Posner, 2003b).

Figure 2. Sample's average LPI scores for each of the Five Practices of Exemplary Leadership.

Statistical Tests

In order to elucidate any relationships between the dietitians' specific characteristics and their exhibition of Kouzes and Posner's Five Practices of Exemplary Leadership, a one-way analysis of variance (ANOVA) and independent-samples T-tests was run. When necessary, Post Hoc results were reviewed to further analyze the potential relationships. Pearson's Chi-square test was used to highlight significant correlations. A .05 significance level was used throughout the study.

Dietetic Specialty and Leadership

Regarding dietetic specialty, an initial one-way ANOVA showed that, of all five LPI practices, there was a significant variance among the participant's specialties within

the Challenge scores. Table 1 outlines these initial findings for dietetic specialty as well as initial ANOVA results regarding other factors to be discussed later.

Further examination by Post Hoc confirmed that Business/Entrepreneurial (Business) RDs scored higher than these groups in the following areas: Clinical/MNT (Clinical) and Public Health/Community (Public) RDs in Model; Clinical, Public, Communication/Journalism (Communication), and Counseling RDs in Inspire; Clinical and Community RDs in Challenge; and Clinical RDs in Encourage. Also, dietitians specializing in Education earned higher Challenge scores than Clinical dietitians. There was no significant variance among groups for Enable scores. Table 2 illustrates these specific relationships regarding dietetic specialty for each of the five leadership practices.

Highest College Degree Earned and Leadership

Relationships between education and leadership were then investigated in the same manner. The preliminary one-way ANOVA test showed a significant variance of scores among the levels of college degree within the Challenge practice (see Table 1).

The Post Hoc confirmed the following for each practice: in Model scores, RDs with a Master's degree scored higher than those with a Bachelor's degree alone; in Challenge scores, RDs with a Master's degree scored higher than those without, and RDs with multiple Master's degrees scored higher than both RDs with a Bachelor's and RDs with only one Master's degree; and finally, in Encourage scores, RDs with multiple Master's degrees scored higher than both RDs with a Bachelor's and RDs with only one Master's degree (see Table 3).

Table 1

Analysis of Variance for the Five Practices of Exemplary Leadership

Source	<i>df</i>	<i>F</i>	<i>p</i>
<i>Model the Way</i>			
Non-dietetic Leadership (No. of positions)	5	4.68	.00
Dietetics Experience (Years)	4	3.92	.00
<i>Inspire a Shared Vision.</i>			
Non-dietetic Leadership (No. of positions)	5	5.13	.00
Dietetic Experience (Years)	4	3.52	.01
<i>Challenge the Process</i>			
Dietetic Specialty	8	1.96	.05
College Degree Level	3	4.02	.01
Dietetic Participation Level	3	2.00	.03
Non-dietetic Leadership (No. of positions)	5	6.39	.00
Dietetic Experience (Years)	4	3.60	.01
<i>Enable Others to Act</i>			
Non-dietetic Leadership (No. of positions)	5	2.29	.05
<i>Encourage the Heart</i>			
Non-dietetic Leadership (No. of positions)	5	3.10	.00
Dietetic Experience (Years)	4	5.38	.00

Note. Relationships that were not significant have been omitted from the table.

Table 2

Post Hoc Results for ANOVA of Dietetic Specialty for Each of the Five Practices

Source	M Difference	SE	Sig.
Model the Way			
Business/Entrepreneurial $\times$ Clinical/MNT	3.36	1.68	.05
Business/Entrepreneurial $\times$ Public Health/Community	3.74	1.85	.04
Inspire a Shared Vision			
Business/Entrepreneurial $\times$ Communications/Journalism	10.62	4.88	.03
Business/Entrepreneurial $\times$ Counseling	6.71	3.09	.03
Business/Entrepreneurial $\times$ Clinical/MNT	6.68	2.46	.01
Business/Entrepreneurial $\times$ Public Health/Community	5.34	2.69	.05
Challenge the Process			
Business/Entrepreneurial $\times$ Clinical/MNT	6.23	2.22	.01
Business/Entrepreneurial $\times$ Public Health/Community	5.83	2.44	.02
Education $\times$ Clinical/MNT	4.53	2.02	.03
Encourage the Heart			
Business/Entrepreneurial $\times$ Clinical/MNT	4.31	1.80	.02

Note. Relationships that were not significant have been omitted from the table (i.e. regarding dietetic specialty, there were no significant variances of Enable Others to Act scores).

Table 3

Post Hoc Results for ANOVA of Highest College Degree for Each of the Five Practices

Source	M Difference	SE	Sig.
Model the Way			
Master's × Bachelor's	1.53	0.72	.04
Challenge the Process			
Master's × Bachelor's	2.14	0.95	.02
Multiple Masters × Bachelor's	11.56	4.36	.01
Multiple Masters × Master's	9.42	4.38	.01
Encourage the Heart			
Multiple Master's × Bachelor's	8.49	3.53	.02
Multiple Master's × Master's	7.75	3.54	.03

Note. Relationships that were not significant have been omitted from the table.

Employment Status and Leadership

To find variances between employment status and each of the leadership practices, an independent-samples T-test was run. Equal variances of scores were not assumed between employed and unemployed dietitians regarding the practices Inspire, Challenge, Enable, and Encourage because there were differences at the .01 significance level. Dietitians who were employed scored higher on those four practices than unemployed dietitians. Table 4 shows the T-test results for each of the Five Practices regarding employment status. There was no significant variance of Model scores between employed and unemployed dietitians.

Table 4

T-test Results of Employment Status for Each of the Five Practices

	n	M	SD	SE	t	df	p
Inspire a Shared Vision							
Employed	399	41.12	10.35	0.52	0.66	27.87	.00**
Unemployed	27	39.26	14.31	2.75			
Challenge the Process							
Employed	405	42.77	9.45	0.47	1.32	28.97	.00**
Unemployed	28	39.43	13.12	2.48			
Enable Others to Act							
Employed	405	49.91	5.87	0.29	1.32	27.28	.00**
Unemployed	27	47.41	9.70	1.87			
Encourage the Heart							
Employed	401	47.43	7.57	.38	0.52	28.78	.00**
Unemployed	28	46.32	11.10	2.10			

Note. Relationships that were not significant have been omitted from the table.

* $p < .05$. ** $p < .01$.

Dietetic Organization Participation and Leadership

Another T-test showed how participation in dietetic organizations affects tendency to exhibit the Five Practices of Exemplary Leadership. Equal variances were not assumed for Inspire, Challenge and Enable scores because of significant differences

(.05 significance level) between RDs who participated and those who did not participate. (see Table 5). There were no significant differences between groups' Model and Encourage scores regarding dietetic participation.

Table 5

T-test Results of Organization Participation for Each of the Five Practices

	n	M	SD	SE	t	df	p
Inspire a Shared Vision							
Participant	216	42.55	9.94	0.68	3.09	413.5	.00*
Non-participant	208	39.39	11.06	0.77			
Challenge the Process							
Participant	220	44.05	9.11	0.61	3.33	420	.00*
Non-participant	211	40.97	10.12	0.70			
Enable Others to Act							
Participant	218	50.51	5.58	0.38	2.64	410.5	.01*
Non-participant	212	48.94	6.67	0.46			

Note. Relationships that were not significant have been omitted from the table.

* $p < .05$. ** $p < .01$.

Level of Dietetic Organization Participation and Leadership

Relationships between dietetic organization participation levels and leadership practices were explored by running a one-way ANOVA test. The initial test showed a significant difference between groups (Regional, State, National, International) regarding

Challenge scores (Table 1). Further analysis of Post Hoc results determined that dietitians who participated at the international level had higher Challenge scores than those who participated at the state and regional levels (Table 6). Also, it was shown that dietitians participating at the national level scored higher in Challenge than those at the regional level (see Table 6). The Enable scores were also significantly higher for internationally participating RDs compared to regionally participating RDs (Table 6).

Table 6

Post Hoc Results for ANOVA of Dietetic Organization Participation Level for Each of the Five Practices

Source	M Difference	SE	Sig.
Challenge the Process			
National × State	3.09	1.6	.05
International × Regional	11.25	4.56	.02
International × State	9.82	4.62	.04
Enable Others to Act			
International × Regional	5.83	2.85	.04

Note. Relationships that were not significant have been omitted from the table.

Dietetic Leadership Positions, ADA Leadership Institute and Leadership

According to another T-test, dietitians who had previously held a leadership position in a dietetic organization scored higher Encourage points than those who had never done so (Table 7). Similarly, subjects indicating that they were current dietetic

organization leaders exhibited higher Challenge scores than those who were not currently holding dietetic leadership positions, as outlined in Table 7. When it came to the ADA Leadership Institute's effect on leadership practices, dietitians in the sample who had attended the program scored higher than dietitians who did not attend in both Inspire and Challenge (Table 7). Of all the T-tests run, there were no significant differences between groups' Model scores. Although a possible relationship between ADA membership and leadership practices was examined, no significant variances were found.

Non-dietetic Leadership Positions and Leadership

More one-way ANOVA tests showed relationships between number of non-dietetic leadership positions held and leadership practices. A noticeable reoccurring trend indicated that the more non-dietetic leadership positions held, the higher the LPI scores were. Table 1 demonstrates significant difference of scores of all Five Practices, according to the initial ANOVA. Specific results for the significant relationships between groups can be found in Table 8.

Table 7

T-test Results of Dietetic Leadership Factors for Each of the Five Practices

	n	M	SD	SE	t	df	p
Past Dietetic Leadership Position							
Encourage the Heart							
Yes	151	49.30	6.91	0.56	4.07	352.4	.00*
No	271	46.26	8.09	0.49			
Current Dietetic Leadership Position							
Challenge the Process							
Yes	38	47.50	7.24	1.17	4.12	51.33	.00*
No	389	42.15	9.82	0.50			
ADA Leadership Institute Attendance							
Inspire Others to Act							
Attended	11	46.91	6.36	1.12	3.10	11.56	.01*
Never Attended	412	40.77	10.68	.53			
Challenge the Process							
Attended	11	48.09	4.95	1.49	3.67	12.16	.00*
Never Attended	419	42.35	9.80	0.48			

Note. These three factors have been combined into one table because they were discussed together in the text, and individual tables would have been too short to stand alone. Relationships that were not significant have been omitted from the table.

* $p < .05$. ** $p < .01$.

Table 8

Post Hoc Results for ANOVA of Non-dietetic Leadership Positions for Each of the Five Practices

Source	M Difference	SE	Sig.
Model the Way			
3 positions × 0 positions	5.65	1.23	.00
3 positions × 1 position	5.18	1.24	.00
3 positions × 2 positions	4.55	1.34	.00
Inspire A Shared Vision			
3 positions × 0 positions	8.35	1.77	.00
3 positions × 1 position	6.74	1.79	.00
3 positions × 2 positions	5.80	1.93	.00
4 positions × 0 positions	7.04	3.12	.02
Challenge the Process			
2 positions × 0 positions	2.59	1.30	.05
3 positions × 0 positions	8.73	1.61	.00
3 positions × 1 position	6.66	1.62	.00
3 positions × 2 positions	6.15	1.75	.00
Enable Others to Act			
3 positions × 0 positions	3.04	1.05	.00
3 positions × 1 position	3.16	1.06	.00
3 positions × 2 positions	3.31	1.14	.00

Encourage the Heart

3 positions × 0	positions	4.82	1.32	.00
3 positions × 1	positions	4.67	1.33	.00
3 positions × 2	positions	3.90	1.44	.01

Note. Relationships that were not significant have been omitted from the table.

Dietetic Experience and Leadership

Similar to the ANOVA findings for the relationships between number of non-dietetic leadership positions and leadership, the more years practicing dietetics positively related to higher LPI scores. Initially, all Five Practices *except* Enable showed significant differences of scores between groups (Under 1 year, 1-5 years, 6-10 years, 11-15 years, and 15 or more years practicing dietetics), which is outlined in Table 1. Specific Post Hoc results showed the following: RDs with more than 15 years experience scored more Model points than those with 6-10 and 11-15 years experience (Table 9); RDs with more than 15 years experience scored more Inspire points than those with only 6-10 years experience (Table 9); RDs with more than 15 years experience scored more Challenge points than those with under 1 year and those with 6-10 years (see Table 9); RDs with under 1 year experience scored fewer Encourage points than all other groups (Table 9); and RDs with 15 or more years experience also scored more Encourage points than those with only 1-5, 6-10, and 11-15 years experience (see Table 9).

Table 9

Post Hoc Results for ANOVA of Dietetic Experience for Each of the Five Practices

Source	M Difference	SE	Sig.
Model the Way			
More than 15 yrs $\times$ 6-10 yrs	3.73	1.12	.00
More than 15 yrs $\times$ 11-15 yrs	2.18	1.10	.05
Inspire a Shared Vision			
More than 15 yrs $\times$ 6-10 yrs	5.01	1.59	.00
Challenge the Process			
More than 15 yrs $\times$ Less than 1 yr	11.14	5.60	.05
More than 15 yrs $\times$ 6-10 yrs	4.35	1.46	.00
Encourage the Heart			
1-5 yrs $\times$ Less than 1 yr	10.93	4.52	.02
6-10 yrs $\times$ Less than 1 yr	11.12	4.54	.02
11-15 yrs $\times$ Less than 1 yr	11.54	4.54	.01
More than 15 yrs $\times$ Less than 1 yr	13.91	4.44	.00
More than 15 yrs $\times$ 1-5 yrs	2.97	1.06	.01
More than 15 yrs $\times$ 6-10 yrs	2.78	1.16	.02
More than 15 yrs $\times$ 11-15 yrs	2.37	1.16	.04

Note. Relationships that were not significant have been omitted from the table.

Dietetic Organization Participation and Employee Reimbursement

The results of a Pearson's Chi-square test (see Table 10) showed a significant positive correlation between reimbursement and participation (i.e. meeting attendance) in dietetic organizations. That is, if a dietitian was reimbursed by his or her employer for costs associated with participation in dietetic organizations, he or she was more likely to actually participate regularly in dietetic organizations.

Table 10

Pearson's Chi-square Results for Employee Reimbursement and Participation in Dietetic Organizations

				Total	Pearson χ^2	df	<i>p</i>
Reimbursement							
Yes No							
Dietetic Participation							
Yes	90	132	222	15.64	1	.00	
No	44	152	196				
Total	134	284	418				

Note. All correlations were significant at the .01 level.

ADA Membership and Employee Reimbursement

Another significant positive correlation was found between ADA membership and employee reimbursement, suggesting that the dietitians were more likely to become ADA members if their employers reimbursed them for membership fees, etc. (see Table 11).

Table 11

Pearson's Chi-square Results for ADA Membership and Employee Reimbursement

					Total	Pearson χ^2	df	<i>p</i>
Reimbursement								
ADA Membership								
Yes	101	177	278		7.71	1	.01	
No	31	105	136					
Total	132	282	414					

Note. All correlations were significant at the .01 level.

Individual Value and Employer Value of Dietetic Participation

Similarly, Pearson's Chi-square analysis showed that the dietitians were more likely to personally value participation in dietetic organizations (i.e. meeting attendance, voting processes, contributions, etc.) when their employers asserted their value of such participation (see Table 12).

Table 12

Pearson's Chi-square Results for Individual Value and Employer Value of Dietetic

Participation

	Total	Pearson		
		χ^2	df	<i>p</i>
Employer Values Participation				
	Yes	No		
RD Values Participation				
Yes	149	58	207	6.90 1 .01
No	12	19	31	
Total	161	77	238	

Note. All correlations were significant at the .01 level.

CHAPTER 5: DISCUSSION

Conclusions

As hypothesized, statistical analyses suggested a significant relationship between dietetic specialty and leadership practices. Specifically, dietitians in the sample who indicated their specialty to be business/entrepreneurial overwhelmingly scored higher on the LPI than dietitians claiming other specialties. This trend mimics the abundance of business leadership literature compared to the insufficiency of dietetics leadership literature. It seems that leadership is a bedrock component of the business world and has been for quite some time. The dietetic field, on the other hand, is relatively new (Moore, 1970) and is therefore just recently embracing the significant role leadership must play in dietetic professions. Perhaps dietitians electing to work in the business/entrepreneurial segment of the profession have been able to exercise leadership behaviors more readily than others because they are surrounded by the mentality that strong leadership is crucial for success in dietetic business.

The results also suggested several other factors as components in increased engagement in Kouzes and Posner's five leadership practices. Higher level of college degree, within this study, often meant more frequent implementation of most of the leadership practices. Perhaps this could be attributed to the additional experience in the college setting, interaction with mentors and colleagues, and allowance for continued personal growth. Earning an advanced degree might allow for dietetic professionals to fine tune their leadership skills in an environment fundamentally designed upon leadership cultivation.

Employment was another factor influencing leadership practices of dietitians in the study. Those who were employed, for the most part, had higher LPI scores than unemployed dietitians. This could mean that dietitians who do not regularly exhibit exemplary leadership behaviors do not find success in the dietetics field and leave, or maybe they become excluded by peers or superiors who value strong leadership in the workplace. Another perspective is that perhaps unemployed dietitians do not have the drive or leadership skills to find employment in the field. On the other hand, the unemployed dietitians in this sample could have been made up of retired dietitians that do not engage in the Five Practices because they no longer encounter the same type of professional interaction that fosters and requires these behaviors.

Dietitians in this study were more likely to practice three of the five LPI traits if they regularly participated in dietetic organizations, such as the ADA. The three practices (Inspire, Challenge, and Enable) might be a result of the dietetic organizations' encouragement of such behavior. Inspire a Shared Vision means communicating a common goal and inspiring others in the organization to collectively strive for success. The ADA actually incorporates this very theory into its official definition of leadership (Gregoire & Arendt, 2004). Challenge the Process means working through obstacles and using creativity to reach the organization's shared vision. Participation in dietetic organizations is fundamental in making change in the dietetics field, so it is not surprising that members of these organizations would exhibit this trait regularly. Enable Others to Act requires fostering collaboration of those involved, helping them to become engaged in the process. Apparently, dietetic organizations are able to apply this idea and help their participants remain actively involved.

The results also showed that the more non-dietetic leadership positions that a dietitian held, the higher he or she would score in all five leadership practices. This suggests that strong dietetic leaders are also strong leaders in their communities or other areas of interest. It may be that the additional experience in those areas supplement their leading skills overall, which carries into their dietetics practice.

One clear finding was that the longer a dietitian works in the field of dietetics, the more he or she exhibits almost all of the Five Practices. Those that had worked in the field for over 15 years consistently outscored those with less experience. This reinforced many authors' notion that leadership is not necessarily inborn, but can be developed over time and with experience (Kotter, 2001; Manthey, 2002; Corrigan, Lickey, Campion & Rashid, 2000).

Other factors investigated in this study significantly related to higher LPI scores, but for only one or two of the Five Practices. Dietitians who had previously or currently held dietetic leadership positions, participated in dietetics organizations at the national or international level, or those that had attended the ADA Leadership Institute tended to score more points. It is possible, however, that these results were specific to this particular sample.

A few significant correlations outside of LPI scores were uncovered, including correlations among employee reimbursement, dietetic organization participation, ADA membership, and value of participation according to the individual and to the employer. The results suggested that dietitians are more likely to participate in dietetics organizations and become ADA members if their employers reimburse them for associated costs. This means that certain aspects of dietetic organizations—meeting

attendance, voting processes, contributions, volunteering—could all be improved if employers are able and willing to allocate funding for their employees to do so. Moreover, it was found that individual dietitians tended to value participation in these organizational activities if their employers valued it. Focusing on employers' endorsement, then, is vital in boosting participation, and therefore the advancement, of dietetic organizations.

Applications

The results from this research can be put to use by dietetic professionals in a variety of avenues. The aforementioned correlation between employer endorsements of organizational participation would be a good place to start. Only 32% of the dietitians in this study had been reimbursed by their employers for organizational participation. If other states have similar trends, then major strides can be made in this country by working with companies and organizations that employ dietetic professionals.

As far as the relationship between dietetic specialty and leadership practices, the findings from this study can be used to cater to the needs of the different dietetic subgroups. Dietetic organizations can refer to the results to find out which types of dietitians need whichever specific leadership development. They could, for example, develop an online leadership training course tailored to clinical dietitians. Their website, <http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/index.html>, is already welcoming and user-friendly. If it were to include member access to the online LPI self assessment, users could become more aware of their own leadership behaviors. Better yet, there could be follow-up dietetic leadership development online, specific to the results of the individual's LPI scores and specialty.

Certain findings—such as the effect of advanced degrees or serving as organizational leaders—might be of interest to individual dietitians when making career choices. Results from all the other factors investigated in this study can also be used in the design of continuing education. While this may take a good deal of time, effort, and resources, it would directly and effectively address the demand for leadership development in the field of dietetics.

Warranted Research

Though this body of research explored a wide variety of factors affecting dietitians' leadership behaviors, it was not completely exhaustive. Additional research could address specific concerns of various dietetic organizations or dietetic professionals. To find out if the rest of the country exhibits trends similar to these findings, replications of this study should be conducted in each state, or a national version should be considered. A vast array of leadership assessment and development studies could be carried out to increase the body of literature regarding dietetics leadership. There could even be an investigation of leadership content in the coursework of various dietetic programs' undergraduate curricula, for example. Generally, more research is crucial for the progression of leadership development in the field of dietetics.

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APPENDIX A: DIETETIC PROFESSIONAL SURVEY

1. Sex: ☐ Female ☐ Male

2. Age: ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39
☐ 40-44 ☐ 45-49 ☐ 50-54 ☐ 55-59
☐ 60-64 ☐ 65-69 ☐ 70-74 ☐ 75-80
☐ Other (please specify): _____

3. Race/ethnic background:
☐ American Indian ☐ Alaska Native
☐ Asian ☐ Black or African American
☐ Native Hawaiian or other Pacific Islander ☐ White
☐ Other (Please specify): _____

4. Marital status:
☐ Married ☐ Single

5. Circle all degrees you have completed, and indicate your major and graduation year for each degree:
Bachelors Major: _____ Year: _____
Masters Major: _____ Year: _____
PhD Major: _____ Year: _____
Other (specify): _____ Major: _____ Year: _____

6. Please indicate your title.
☐ Dietetic Technician, Registered (DTR) ☐ Registered Dietitian (RD)

7. How many years have you been practicing dietetics?
☐ Under 1 year
☐ 1-5 years
☐ 6-10 years
☐ 11-15 years
☐ More than 15 years

8. Are you currently employed? ☐ Yes ☐ No

9. Do you work full-time or part-time?
☐ Full-time ☐ Part-time ☐ I am not employed.

10. What is your job title? _____

11. Are you currently a member of the American Dietetic Association (ADA)?
☐ Yes ☐ No

APPENDIX A: DIETETIC PROFESSIONAL SURVEY

12. In which area of dietetics do you primarily specialize?

- ☐ Business/entrepreneurial
☐ Clinical/medical nutrition therapy
☐ Counseling
☐ Communication/journalism
☐ Education (ex. college faculty, continuing education)
☐ Food/culinary
☐ Public health/community nutrition
☐ Research
☐ School nutrition service
☐ Other (specify): _____

13. Are you considering a change of dietetic specialty?

☐ Yes ☐ No (please skip to question #17 on page 2)

14. Which dietetic specialty will you pursue?

- ☐ Business/entrepreneurial
☐ Clinical/medical nutrition therapy
☐ Counseling
☐ Communication/journalism
☐ Education (ex. college faculty, continuing education)
☐ Food/culinary
☐ Public health/community nutrition
☐ Research
☐ School nutrition service
☐ Other (specify): _____

15. When do you plan to change specialties?

☐ Within a year ☐ In 1 to 5 years ☐ In more than 5 years

16. For what reason(s) are you considering a change of specialty?

- ☐ Personal interest
☐ Stronger background (i.e. education/experience)
☐ To earn more money, better benefits, etc.
☐ Other (please specify): _____

Please answer the following questions based on your experience **outside of employment, since college**.

17. Do you participate in dietetic organizations/meetings?

☐ Yes ☐ No (please skip to question # 19)

18. At which level of the organization do you participate (check all that apply)?

☐ Regional ☐ State ☐ National ☐ International

19. Do you get reimbursed by your employer for any costs associated with dietetic organization/meeting participation?

☐ Yes ☐ No

20. Would you participate more in organizations/meetings if you *were* reimbursed?

☐ Yes ☐ No

APPENDIX A: DIETETIC PROFESSIONAL SURVEY

21. Do you value participation in dietetic organizations/meetings?

☐ Yes ☐ No

Please explain why or why not:

22. Does your employer value participation in dietetic organizations/meetings?

☐ Yes ☐ No ☐ I do not know ☐ I am self-employed

23. Have you ever held a leadership position in a dietetic organization?

☐ Yes ☐ No (please skip to question # 26 on page 3)

24. For how long did you hold your longest-lasting leadership position in a dietetics organization?

☐ Under 1 year ☐ 1 year ☐ 2 years ☐ 3 years
☐ 4 years ☐ 5 years or more

25. At which level did you hold your longest-lasting leadership position in a dietetics organization?

☐ Regional ☐ State ☐ National ☐ International

26. Do you currently hold a leadership position in a dietetics organization?

☐ Yes ☐ No (please skip to question # 28)

27. In which level of dietetic organization do you hold a leadership position?

☐ Regional ☐ State ☐ National ☐ International

28. Have professional development portfolio guidelines impacted your decisions to pursue leadership positions?

☐ Yes ☐ No

29. Have professional development portfolio guidelines impacted your decisions to participate in dietetic organizations/meetings?

☐ Yes ☐ No

30. Please explain how your decisions were affected by the portfolio requirements, if applicable.

31. Have you heard of the ADA Leadership Institute? ☐ Yes ☐ No

32. Have you ever attended the ADA Leadership Institute? ☐ Yes ☐ No

33. Do you plan to attend the ADA Leadership Institute in the future?

☐ Yes ☐ No

34. Which *non-dietetic* leadership position(s) have you held since college?

☐ Community board position

☐ School board position

☐ Advisory board position

☐ Athletic team captain/coach

☐ Religious organization position

☐ Other (please specify): _____

☐ I have not held any non-dietetic leadership positions since college.

APPENDIX B: LEADERSHIP PRACTICES INVENTORY

Leadership Practices Inventory

For the following questions, the RATING SCALE runs from 1 to 10. Choose the number that best applies to each statement.
 1=Almost Never; 2=Rarely; 3=Seldom; 4=Once in a While; 5=Occasionally; 6=Sometimes; 7=Fairly Often; 8=Usually; 9=Very Frequently; 10=Almost Always

To what extent do you typically engage in the following behaviors? Choose the response number that best applies to each statement and record it in the box to the right of that statement.

1. I set a personal example of what I expect of others.	____
2. I talk about future trends that will influence how our work gets done.	____
3. I seek out challenging opportunities that test my own skills and abilities.	____
4. I develop cooperative relationships among the people I work with.	____
5. I praise people for a job well done.	____
6. I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.	____
7. I describe a compelling image of what our future could be like.	____
8. I challenge people to try out new and innovative ways to do their work.	____
9. I actively listen to diverse points of view.	____
10. I make it a point to let people know about my confidence in their abilities.	____
11. I follow through on the promises and commitments that I make.	____
12. I appeal to others to share an exciting dream of the future.	____
13. I search outside the formal boundaries of my organization for innovative ways to improve what we do.	____
14. I treat others with dignity and respect.	____
15. I make sure that people are creatively rewarded for their contributions to the success of our projects.	____
16. I ask for feedback on how my actions affect other people's performance.	____
17. I show others how their long-term interests can be realized by enlisting in a common vision.	____
18. I ask "What can we learn?" when things don't go as expected.	____
19. I support the decisions that people make on their own.	____
20. I publicly recognize people who exemplify commitment to shared values.	____
21. I build consensus around a common set of values for running our organization.	____
22. I paint the "big picture" of what we aspire to accomplish.	____
23. I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.	____
24. I give people a great deal of freedom and choice in deciding how to do their work.	____
25. I find ways to celebrate accomplishments.	____
26. I am clear about my philosophy of leadership.	____
27. I speak with genuine conviction about the higher meaning and purpose of our work.	____
28. I experiment and take risks, even when there is a chance of failure.	____
29. I ensure that people grow in their jobs by learning new skills and developing themselves.	____
30. I give the members of the team lots of appreciation and support for their contributions.	____