MEASURING THE IMPACT OF PROFESSIONALISM AND LEADERSHIP

TRAINING ON DIETETIC STUDENTS AT THE

UNIVERSITY OF WISCONSIN-STOUT

By

Jessica Frein

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Carol Seaborn, Thesis Advisor
Thesis Committee Members

_____

Mary McManus

_____
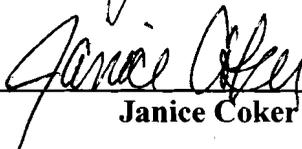
Janice Coker

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Author: **Frein, Jessica L.**

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In recent years, dietetic professionals and students have been encouraged to improve their

leadership capabilities, yet little research or guidance with respect to dietetics exists for

enhancement of these skills. The objective of this pilot study was to determine if an

intervention program would improve key leadership skills. Sixty-nine dietetic students, aged

19-48 yrs old (mean age 23), took part in the four-month study. During the program, the

experimental group (n=14) participated in two leadership development seminars, one media

training workshop, and presented posters at the campus health fair or campus research day, as

well as the annual Wisconsin Dietetic Association state meeting, while the control group

(n=55) did not participate in this supervised training. All subjects completed a validated

Student Leadership Practices Inventory (sLPI). ANOVA indicated improvement over time in

four of the five key leadership practices from the sLPI (challenging the process, inspiring a

shared vision, enabling others to act, modeling the way and encouraging the heart; $P=0.05$,

NS, 0.05, 0.01, and 0.05, respectively). Post-intervention t-tests also indicated higher scores

for the experimental group in the five key practices of leadership; $P = 0.05, 0.05, 0.01, 0.01$,

and 0.001, respectively. Pre-intervention, the t-test indicated only one significant difference; the experimental group had a higher score on enabling others to act (P=0.05). Findings of the study indicate that participation in a short term leadership program improves key leadership qualities. This leadership pilot program warrants further study and may be useful in training future dietetic practitioners.

The Graduate School

University of Wisconsin Stout

Menomonie, WI

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CHAPTER I: INTRODUCTION

Introduction

Leadership and professionalism are two terms that encompass a large category of skills. Over the past century, theorists, professionals and educators have developed numerous theories, models and frameworks that describe and organize the concept of leadership (Gregoire & Arendt, 2004). Although there has been a great amount of literature documenting leadership, it is very hard to simply define (Drengler, 2001). Definitions for the term leadership have included:

1. "Leadership is authentic self-expression that creates value" (Melum, 2002).

2. "Leadership is a complex process by which a person influences others to accomplish a mission, task or objective and directs the organization in a way that makes it more cohesive and coherent" (Big Dog's Leadership Page, 2004).

3. "to set direction for the organization, groups and individuals and also influence people to follow that direction" (McNamara, 2004).

4. "a leader is interpreted as someone who sets direction in an effort and influences people to follow that direction" (McNamara, 2004).

5. "Leadership is the ability to influence the thinking and actions of people" (Leadership and Teamwork, 2003-2004).

Although the concept of leadership has repeatedly been defined and conceptualized, research on leadership is quite limited within the realm of dietetics (Gregiore & Arendt, 2004). As defined by the American Dietetic Association, leadership is "the ability to inspire and guide others toward building and achieving a shared vision" (Gregiore & Arendt, 2004). Currently, there is growing interest in the health field for leadership development (Woltring,

Constatine, & Schwartz, 2003). In order to keep up with other practices in health care, professionals in the dietetics field must also continue to improve their leadership skills.

Professionalism is a set of skills that is hard to define because it does not have clear-cut criteria. Wilensky (1964) provides a somewhat comprehensive definition: "the professional is engaged in a full-time occupation, has a strong motivation for choosing a particular professional career, possesses a specialized body of knowledge and skills, has a service orientation, adheres to a code of ethics and belongs to a professional association". As with leadership, literature published about professional development within the field of dietetics is quite limited as well (Spears, Somonis & Vaden, 1992).

Examining specific studies aimed at dietetic students' leadership and professionalism development further narrows avenues for investigation, highlighting the limited availability of literature in this area. Rationale to support the need for additional research about dietetic students and leadership can also be supported by the expressed concern of dietetic students and faculty from the University of Wisconsin-Stout's Dietetic Program about lack of opportunities for professional and leadership.

Statement of the Problem

The main goal of this study is to determine if implementation of a pilot leadership and professionalism development program in the Dietetics Program at the University of Wisconsin-Stout will meet the expressed need of dietetic students by fostering growth in leadership and professionalism practices. The study took place beginning October 26, 2004 and ended on May 11, 2005. Fourteen students participated in the leadership and professionalism development program. Results of their individual assessments will be compared with those of a control group, a total of fifty-five dietetic students, who did not

participate in the program. Comparison of the two groups will examine any differences in leadership and professionalism development due to participation in the program. Funding for this program was obtained through a Stout University Foundation grant and covered the study expenses of all fourteen students included in the program.

Objectives

The overall objective of the study is to examine the effects that a pilot leadership and professionalism development program will have on dietetic students at the University of Wisconsin-Stout. Individual objectives that will be examined within the study are to:

1. Determine if leadership and professionalism practices exist in University of Wisconsin-Stout dietetic students based on self-reports;

2. Implement a multi-faceted pilot program to develop leadership and professionalism competencies in dietetics students;

3. Evaluate the progress that dietetic students make toward achieving these competencies with the Student Leadership Practices Inventory and the individual dietetics professionalism assessment (Kouzes & Posner, 1987; Frein, 2004);

4. Evaluate perceived leadership practices of dietetic students at the University of Wisconsin-Stout based on leadership characteristics developed by Kouzes and Posner: Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way and Encouraging the Heart (Kouzes & Posner, 1987); and

5. Determine if any demographic factors (sex, age, academic age, and involvement in activities) play a role in the development of leadership and professionalism practices in dietetic students at the University of Wisconsin-Stout.

Assumptions

This study was conducted under the following general assumptions:

1. Students can accurately identify their own leadership and professionalism behaviors;

2. Peer evaluators can accurately identify leadership and professionalism behaviors in dietetic students;

3. Students will respond to answers on the assessments to the best of their ability and will do so truthfully;

4. Leadership and professionalism practices are measurable and quantifiable;

5. Students participating in the leadership and professionalism program will attend all conferences and seminars that are included in the program.

Limitations

Known limitations to the study prior to the start of the program include:

1. Data gathered for the study will be collected only from dietetic students at the University of Wisconsin-Stout (one dietetic program in the United States);

2. Students choosing to participate in the leadership and professionalism development program will be self-selected as volunteers. These students may already have stronger leadership and professionalism practices because they already seek out opportunities to improve these skills.

Organization

The format of this paper includes the following: introduction, literature review, methodology, results, discussion, appendices, and references.

CHAPTER II – LITERATURE REVIEW

Introduction

For centuries, the topic of leadership has been hypothesized about, defined, and summarized through specialized frameworks and theories. Discussed by James MacGregor Burns, author of *Leadership*, "Leadership is one of the most observed and least understood phenomena on earth" (1978, p. 2). Infinite definitions have been developed for leadership over the years, but to date, a universal definition for the term has not been generated. According to the American Dietetic Association (ADA), leadership is "the ability to inspire and guide others toward building and achieving a shared vision" (Borra and Kunkel, 2002, p. 1). In *Exploring Leadership,* leadership is defined as "a relational process of people together attempting to accomplish change or make a difference to benefit the common good" (Komives, Lucas, and McMahon, 1998, p. 11). In *The Leadership Challenge*, leaders are defined by Kouzes and Posner (1987, p. 8) as "people who are willing to take risks to innovate and experiment in order to find new and better ways of doings things." Hundreds, even thousands of other definitions for leadership have been generated, based on individual behaviors and characteristics, giving the implication that there is not an explicit definition that can encompass every variable and situation that a "leader" may encounter.

Leadership Approaches

As the definition of leadership has changed and developed over time, so have theories and models used to describe and categorize leadership behaviors and processes. Gregoire and Arendt (2004) present a thorough review of the many approaches to leadership, which are summarized in Table 1. As presented, approaches to leadership include leader traits, behavior, power/influence, contingency/situational, and reciprocal.

Table 1

Summary of Leadership Approaches as Referenced in Gregoire and Arendt (2004)

Approach	Summary
Trait	
Effective leader traits	Effective leader traits include intelligence, awareness of others needs, self-confidence, task understanding, initiative and persistence in working with problems, aspiration to accept responsibility, and interest in holding a dominant position.
Successful leader traits	Successful leaders have characteristics including diligence and motivation when working towards goals, intense drive for responsibility and achievement, self-confidence, acceptance for their actions, and excellent response to interpersonal stress and obstacles. Leaders also have an influence over the actions of others, approach tasks with vigor, are able to adjust to many situations and are motivated by achievements.
Big Five Model	Leadership personality traits are broken down into five groups: surgency, conscientiousness, agreeableness, adjustment, and intelligence.
Behavior	
University of Michigan leadership studies	Leadership is categorized as either employee oriented or task oriented. Employee orientation focuses on relations with coworkers/subordinates component whereas task oriented focuses specifically on execution of the task at hand.
Ohio State University leadership studies	Leadership behavior has two individual dimensions: consideration and initiating structure. Consideration comprises actions aimed at developing working relationships between employees. Initiating structure includes the actions relating to the work that is being completed.
Managerial grid/leadership grid	Leadership is viewed as a two-dimensional grid based on concern for production and concern for people. Managers are categorized using numbers (1-low, 9-high) on the grid, determined by the amount of concern for production and people.
Power/influence	
Power	Leaders hold/use different types of power such as reward, coercive, legitimate, expert, referent, and control.
Influence	Leaders use eleven tactics to have an influence over others: consultation, collaboration, ingratiation, pressure, rational persuasion, inspirational appeals, exchange, personal appeals, legitimating tactics, coalition tactics, and apprising.
Contingency/situational	
Situational leadership	Leadership is dependent on the situation, manager and subordinates involved.
LPC contingency model	LPC (least preferred coworker) score and situation determine leadership effectiveness and are influenced by three variables: leader-member relations, task structure, and position power.
Path goal theory	The situation has an effect on the leader's behavior, which in turn, will have an influence on subordinates satisfaction and functioning.
Leaders substitutes theory	Substitutes and neutralizers (can take on the form of subordinates, tasks etc.) are two situational variables that can have a negative effect on leadership.
Multiple linkages model	Managerial behavior in combination with situational variables interact with intervening variables, determining the performance of the group
Cognitive resources theory	Leader performance is established by leader behavior, two aspects of the situation (interpersonal stress and type of task the group has on-hand) and leader traits (intelligence and experience).
Reciprocal	
Transactional leadership	Punishment, rewards, and incentives are used by leaders, under their conditions, to motivate people
Transformational leadership	Followers are driven to complete additional work or higher quality work due to admiration, respect and loyalty to their leader. Idealized influence, intellectual stimulation, individualized consideration and inspirational motivation are leadership behaviors that lead to these changes in followers.
Full-range of leadership model	Combines transactional and transformational leadership.
Servant leadership	Leaders are servant to followers before being a leader. Five factors to being a servant leader are: authentic, vulnerable, accepting, present and useful.
Relational leadership model	Five components of leadership are focused on relationships: intentionally building commitment, including diverse points of view, orientation, give power to involved people, and ethics.
Emotional intelligence	Foundation tied to emotional intelligence (social skills, self-motivation and empathy) are used by effective leaders.
Primal Leadership	Moods and actions of individuals involved in and organization are affected by leaders, and this in turn, affect trust, learning and sharing within the organization.

Modern approaches most relevant to the context of this research include: situational

leadership, transformational leadership and servant leadership. Many different models exist

that can be categorized as situational, the most popular including theories from Fiedler, House, Hersey, and Blanchard (Wildcat Leadership Committee, 2005). Situational leadership assumes that a range of situational factors will have an impact on the leader's actions, and that depending on the situation, leaders will act in different ways (Situational Leadership, 2005; Wildcat Leadership Committee, 2005). As referenced in Situational Leadership (2005), Yukl identifies six combined variables that have an effect on leadership: subordinate effort, subordinate ability/role clarity, organization of work, cooperation/cohesiveness, resources and support, and external coordination. Leadership is also affected by followership in a sense then, because leadership actions can be impacted just as much by others as by the individual leader.

This leads into servant leadership; "Followership may be as critical to our understanding of leadership as leadership itself" (Terry, pp. 213, 1993). Servant leadership originates from values and beliefs (Wildcat Leadership Committee, 2005). A servant leader is considered to be an individual who gives everything to all other group members in order to motivate them into achieving the group's goals (Wildcat Leadership Committee, 2005). Examples of servant leaders include Mahatma Gandhi and Mother Teresa.

Transformational leadership is another type of leadership referenced in recent years. This type of leadership assumes that a leader is someone who is inspiring, has a vision and passion which will lead to achievement, and is energetic and enthusiastic in nature (Situational Leadership, 2005). A transformational leader is someone who leads others by developing and recruiting others to share a vision, leads others to this vision through failures and successes, listens and communicates with followers, and is enthusiastic and positive in their efforts (Situational Leadership, 2005). By generating enthusiasm and positive energy

within the group, leader and followers develop a synergy that can yield impressive growth, resulting in an even greater combined effort toward the goal than individual efforts would have been separately (Burns, 1978).

The Social Change Model of Leadership is another model, although not included in the summary by Gregoire and Arendt (2004). This model contains three domains (the individual, the group and the community) that correspond and interact with a set of seven values, otherwise known as the Seven Cs (Consciousness of Self, Collaboration, Citizenship, Congruence, Common Purpose, Commitment and Controversy with Civility) (Leadership Academy, 2005). Interaction between the domains and the values are intertwined with two goals: "to promote the increase of self-knowledge, and understanding of one's interests, talent and values" and "to increase leadership competence by which the capacity to mobilize the individual and group to work collaboratively is developed" (Leadership Academy, 2005). This leadership model works on the premise of service-based social change that will result in a change for the better and is displayed in Figure 2 (Leadership Academy, 2005).

Group Values — Collaboration, Common Purpose, Controversy with Civility

Individual Values — Congruence, Consciousness of Self, Commitment

Citizenship — Societal/Community Values
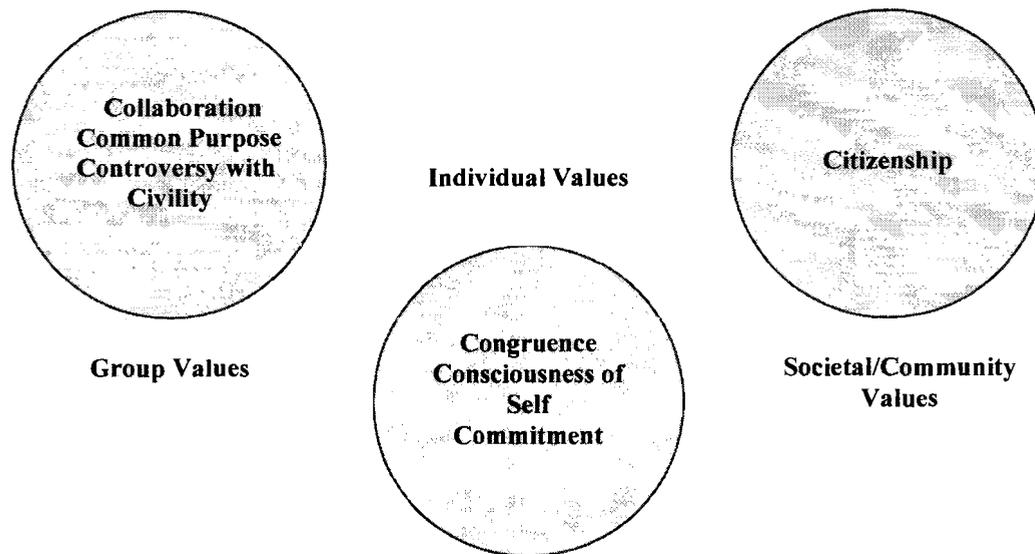
Figure 1. The Seven C's of the Social Change Model of Leadership (Leadership Academy, 2005).

Measures of Leadership

As there are many definitions and models used to define and categorize leadership, there are also numerous instruments used to measure leadership. Most of these instruments use a scoring system comprised of scales or dimensions which measure leadership styles, behaviors and skills (Gregoire and Arendt, 2004). The Leadership Practices Inventory (LPI) (Kouzes and Posner, 1998) is one instrument that has been utilized in academic settings with students. The Student Leadership Practices Inventory (SLPI, see Appendix A) has been adapted from the original LPI, which has been proven to be a valid and predictable instrument for measuring leadership practices (The Leadership Practices Inventory, 2002). The five leadership practices were generated through interviews and case studies from over 2500 managers examining personal-best leadership experiences (Kouzes and Posner, 1998). These experiences were then generated into behavioral statements and were put through many iterative psychometric processes before becoming the final instrument, which has been

administered to over 350,000 managers and non-managers from various disciplines,

organizations and demographical backgrounds (Kouzes and Posner, 2002). The instrument is

also continually updated from ongoing analysis through which over 100,000 respondents

have been involved (Kouzes and Posner, 2002). The LPI has been found to have consistent

internal reliability with Reliability (Chronbach Alpha) Coefficients being .77, .87, .80, .75,

and .87 for Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to

Act, and Encourage the Heart, respectively (Kouzes and Posner, 2002). The LPI has also

been found to have excellent face validity and to have consistent findings regardless of

gender, ethnicity, culture, and organization characteristics (Kouzes and Posner, 2002).

The SLPI examines leadership through a series of thirty questions, which are

categorized into five scales: 1) Challenge the process, 2) Inspire a shared vision, 3) Enable

others to act, 4) Model the way, and 5) Encourage the heart (Kouzes and Posner, 1998).

According to Kouzes and Posner, these five practices are the backbone to developing

leadership abilities (1987). Each of these practices focuses on specific types of actions and

each are associated with specific behavior commitments in leaders who are at their personal

best (Kouzes and Posner, 1987); these actions and commitments are summarized in Table 2.

Table 2

Actions and Behavior Commitments of the Five Leadership Practices of Individuals at Their Personal Best: Developed From the Leadership Practices Inventory (Kouzes and Posner, 1987).

Leadership Practice	Actions	Behavior Commitments
Challenging the Process	Seek challenges Innovative Recognizes good ideas Turns "failures" into learning Learns from mistakes and successes	Searches for opportunities Experiments and takes risks
Inspiring a Shared Vision	Desires to make something happen Develops "pictures" before starting Shares own belief and enthusiasm with others	Envisions the future Enlists others
Enabling Others to Act	Builds teams Shows commitment to the cause Involves everyone in the project to build support	Fosters collaboration Strengthens others
Modeling the Way	"Practice what you preach" Is consistent with beliefs Is persistant in pursuing visions	Sets the example Plans small wins
Encouraging the Heart	Is genuine in action Expresses pride for team accomplishments Knows how to intertwine hard work and pleasure	Recognizes individual contribution Celebrates accomplishments

The SLPI was used to measure leadership in a study conducted by Arendt (2004). This research examined leadership behaviors of hospitality management and dietetic students, including a group of students from the University of Wisconsin-Stout campus. This study (Arendt, 2004) contributed to the formation of this research and was fundamental in choosing the SLPI an important assessment tool to utilize for the current study, in addition to three other reasons:

1. The SLPI has been used repeatedly in leadership research, is a reliable and valid tool, and has been found to be a consistent predictor of the five leadership practices developed by Kouzes and Posner (1987);

2. The SLPI was used in previous dietetics literature examining leadership practices of students at the University of Wisconsin-Stout and can serve as a comparison tool;

3. The SLPI is an accessible tool for other colleges and universities to utilize in the

future for comparison studies and continuation of research on student leadership in

dietetics as well as other academic fields.

Leadership in the Workplace

In order to determine strategies for developing and implementing leadership

programs, skills that are necessary for leaders in the workforce need to be identified.

Although research on leadership in healthcare has been conducted, there is a need for more

studies to be completed. According to Setliff, Porter, Malison, Frederick, and Balderson

(2003), the Centers for Disease Control and Prevention (CDC) has made recommendations

for schools of public health and state and local health departments to invest greater effort into

creating closer ties between the groups, as well as in providing new approaches for

leadership training to meet the needs of the public health workforce. Reports for the Center

for Health Policy and Health Services Research at the Columbia University School of

Nursing found that although health program managers came from numerous backgrounds

(competent in science and other health care areas), many are lacking in the areas of

leadership and management (Setliff et al., 2003). Important skills that are limited in public

health managers are related to managing operations, conducting evaluations and analysis, and

solving problems (Setliff et al., 2003). During the 1990's, the CDC established three

independent workforce development initiatives targeted at improving management and

leadership in public health: the Sustainable Management Development Program, the

Management Academy for Public Health, and the CDC Leadership and Management

Institute (Setliff et al., 2003). Although separate entities, all three initiatives were based on

the same six guiding principles (Setliff et al., 2003):

1. Emphasis on adult learning,

2. Use of tools that reinforce evidence-based decision making,

3. Individual feedback,

4. Continuous improvement of the learning process,

5. Post-training support for networking and life-long learning, and

6. A focus on teamwork.

Results of the initiatives specific to leadership development found that managers needed to develop a more analytical type of decision making, include coworkers more with group discussions and problem solving, place more emphasis on team efforts, and lastly, that public health officials show greater interest in improving their managerial and leadership skills (Setliff et al., 2003).

When interviewed, the Chief Operating Officer of the University of California, San Francisco Medical Center stated that leaders can be made stronger through broader thinking, planning for the future, stretching their problem solving capabilities across numerous disciplines, and by challenging the status quo (Porter, 2005). She also stated that leaders need to be aware of boundaries, but that should not limit them in their ability to take risks (Porter, 2005). Without taking a risk, achieving a goal (whether an individual or organizational goal) cannot be accomplished, regardless of whether there are failures or successes along the way. Students and young professionals must be introduced to this concept and encouraged to challenge processes by searching for opportunities, experimenting, and taking risks.

In an article discussing leadership in academic medicine, Souba (pp. 3, 2004) states that "leadership doesn't just happen. Effort and focus are essential in crafting a strategic

vision, executing against the strategy by allocating resources and motivating people, and tackling tough problems along the way". The article goes on to say that "solutions [to solving complex problems] require that people work together, practicing open communication, building teamwork and trust, and holding one another accountable" (Souba, pp. 5, 2004) and that several key activators including mutual respect, trust, flexibility, communication and commitment pave the way for overcoming challenges and reaching accomplishments. These leadership practices coincide quite well with Kouzes and Posner's Five Leadership Practices (1987).

In the article "Developing High-Performance Leaders", leadership development is viewed from the standpoint that leaders learn from their work, and thus expand their leadership capacity (Melum, 2002). Melum (2002) lists important capacities, as noted by the Center for Creative Leadership, that leaders learn over time including: self-awareness, self-confidence, ability to see the broader picture, creative thinking, the ability to effectively work in social systems, and the ability to learn from experience. Melum (2002) also discusses components of leadership development that the top one-hundered leadership training companies utilize: succession planning, personal development plans, 360-degree assessments, executive coaching, career counseling, mentoring, job rotations, and job shadowing. Findings suggest that these components have heightened impacts when linked with each other versus being used alone (Melum, 2002). Another key concept noted by Melum (2002) is that providing challenging experiences offers a greater opportunity for growth and development of leaders.

Lastly, research on management and leadership was conducted by the Saratoga Institute and the American Management Association (AMA) (as summarized in Drengler,

2001). The report, "Leadership Development: Programs and Practices, Future Directions, Examples and Models" discussed a number of leadership development components in the participating companies, including formal external education, self-directed study, succession planning, team projects, challenging assignments, community projects, classroom training, career-pathing system, on-the-job experience, and mentoring (Drengler, 2001).

Leadership Programs

According to Terry (pp. 217, 1993), "leadership cannot be taught; it can be learned." Also stated by Terry, (pp. 217, 1993), "Teaching involves theory; learning requires doing. Thus leadership is learned by reflection on action rather than taught in the classroom." Although leadership theories taught in academic settings are important, leadership practices are better learned through action. One way that leadership practices, such as those offered by Kouzes and Posner (1987), can be supplemental to classroom learning is to implement leadership programs for students that will enhance their academic education.

In 1991, the CDC and University of California (UC) Public Health Leadership Institute (PHLI) launched a public health leadership program, the first of its kind (Woltring, Constatine and Schwartz, 2003). PHLI's educational objectives (Woltring et al., pp. 105, 2003) included:

1. Provide scholars with knowledge, skills, and experiences that enhance their commitment and ability to provide public health leadership,

2. Support scholars in exercising leadership within their own agency or jurisdiction, within professional organizations and schools of public health, and within other contexts, and

3. Enhance scholars' skill and abilities to develop collaborations that contribute to the development of healthy communities.

PHLI's leadership program took place each year between 1991 and 2000, and graduated a total of five-hundred and two senior officials from state, local, and federal public health agencies, academics, health systems and national health organizations (Woltring et al., 2003). The core curriculum included skills training in the areas of personal growth, communication, community building, collaborative leadership and leading organizational change (Woltring et al., 2003). It included participants in the activities of teleconferences, on-site retreats, networking, readings, personal leadership assessments, electronic seminars, and peer consultations (Woltring et al., 2003). Results of the study by Woltring et al. found that PHLI had a positive impact on effectiveness of leadership at personal, organizational and community levels in the field of public health. Another important finding of the study concluded that participation in PHLI resulted in enhanced professional networks and an increase in tendency to commit to continued learning, as well as in mentoring and educating others (Woltring et al., 2003). One last interesting finding was that thirty-four percent of participants claimed that PHLI helped them to find a better balance between professional and personal obligations (Woltring et al., 2003).

Leadership in Dietetics

Although literature on the broad topic of leadership appears to be inexhaustible, narrowing the topic to leadership in relation to dietetics considerably limits the amount of available literature. Once again, Gregoire and Arendt present a summary of literature on the topic of leadership and dietetics up to 2004 (2004). This research is summarized in Table 3.

Table 3

Summary of Designs and Important Findings of Leadership Research in Dietetics, as referenced in Gregoire and Arendt (2004)

Author, year	Design	Important Findings
Schiller and colleagues, 1993	Survey	Identified two prevailing leader styles of dietetics professionals: dependent (timid, extremely cautious and seeking to please others) and independent
Molt, 1995	Survey	Found that experience was not a predictor of leadership but that six types of experiences contributed to leadership skills development: working with others, breadth of experience, analysis of the organization, specific assignment, professional organization work and volunteer service.
Arensberg and colleagues, 1996	Survey	Clinical nutrition managers self-perception reported that they have transformational leadership qualities. The communication scale had the lowest scores and the highest scores were on the leadership scale.
Dykes, 1999	Survey	No significant differences on the Visionary Leader were found when comparing self-ratings of directors.
Mislevy and colleagues, 2000	Survey	Clinical nutrition managers had greater access to opportunity and resources as well as having a higher overall empowerment score when pursuing education higher than a baccalaureate degree.
Burzminski, 2002	Survey	More transformational leadership behaviors were found in dietetic interns when compared to transactional leadership.
Golzynski, 2003	Delphi Method	Brought about seventeen professionalism categories and "Showing leadership" emerged as the third most important category.

Since the review by Gregoire and Arendt (2004), one other pertinent study has emerged in the arena of leadership and dietetics. The study, titled "Leadership Behaviors in Undergraduate Hospitality Management and Dietetics Students" looked specifically at leadership behaviors and practices of these students through individual interviews, questionnaires, and focus groups (Arendt, 2004). Conclusions of the study, specific to dietetic students, found that leadership behaviors were displayed at work and in the classroom, and that reading, lectures, coursework and holding leadership positions increased scores (Arendt, 2004). Recommendations from Arendt's study also expressed the need for further research in this area that focused in relation to development and assessment of leadership behaviors in dietetic students (2004).

In addition to research aimed at studying leadership in dietetics, there have been numerous reports and articles designed to bring about leadership awareness of dietetics, and to fostering leadership development for dietetic professionals and students. Garner (pp. 1,

1993) proposed that dietetic leaders can "provide inspiration and guidance to students and young professionals" and that "leaders inspire enthusiasm for the profession." She also said that using previous experience, skills, networking, being a role model and a mentor to these young professionals will help to bring more students to the field of dietetics and will help to improve the leadership development of all people practicing in dietetics (Garner, 1993).

In an article by Porter, three individuals' opinions about leadership were examined (2005). The dietetic intern interviewed stated that by having opportunities to make her own decisions, take risks, and think independently, she was able to more fully develop her leadership skills (Porter, 2005). In addition to experiencing opportunities, the intern also felt that by discussing these experiences and being allowed to give feedback to her preceptors, she had a feeling of empowerment and encouragement to look at the bigger picture (Porter, 2005).

According to the Journal of the American Dietetic Association (JADA), the publication of the primary professional dietetic organization in the United States, "to be effective leaders, dietitians should cultivate effective communication and motivational skills" (Pace, pp. 1, 1995). The article also stated that dietitians "should know how to tap the potentials of talented employees," and they need to take on the roles of building team unity and trust, improving communication between members, motivating members and taking risks (Pace, pp. 1, 1995).

JADA also recognizes the need for effective leadership for dietetic practitioners as evidenced in numerous research studies, reports and through professional standards. In the next century, new technology and treatments in healthcare, along with heightened costs and changing demographics will require dietitians to communicate effectively and motivate

others to perform to the best of their abilities (Mapping a Course for the Future: Dietetics leadership in the 21st century, 1995). JADA offers key components that contribute to an effective leadership style: clearly communicate a team vision, inspire members to take responsibility, establish trust among employees, unify team members by creating a shared sense of purpose, setting team goals, and recognizing individual differences, accept other viewpoints and by motivating with enthusiasm (Mapping a Course for the future: Dietetics leadership in the 21st century, 1995). Lastly in this report, JADA states its mission, "serve the public through the promotion of optimal nutrition, health and well-being."

Numerous ADA Presidents over the last decade have addressed the issue of leadership in dietetics (O'Sullivan Maillet, 2003; Smith Edge, 2004; Laramee, 2005). Smith Edge took the bold stance that all ADA members are leaders (2003), but also stated that "some leaders are born; but most are developed" (pp. 1, 2004). In "Creating a Legacy of Leadership," Smith Edge made the point that leadership skills can manifest through many forms, and that sometimes, leaders don't realize that they have been practicing leadership roles (2003). Smith Edge went on to say that the best way to develop these skills is by seeking out opportunities for leadership (2003). In "All ADA Members are Leaders", Smith Edge looks at leadership as evolving, stating that "leadership development is an evolutionary process, a lifelong work in progress" (pp. 1, 2003). She noted five characteristics that leaders have in common: they have a plan for the future, don't settle for status quo, are not perfectionists, act as mentors, and know their strengths (2003). O'Sullivan Maillet stated that professionals who maintain an ADA membership play a critical role as leaders by helping to provide superior food and nutrition services as well as by providing education to the public (2003). Leadership capabilities that are consequences as a result of ADA membership

according to O'Sullivan Maillet include: personal skill development and mentoring, easily accessible and affordable professional development, participation in education initiatives that contribute to the public good, and promotion and creation of public policies relating to health and nutrition issues (2003). Lastly, in "Leadership Development: Preparing Dietetics Professionals for Success", Laramee (2005) discusses qualities that embody a leader, this time as the four "E's" of leadership: Energy (being able to face change), Energize (inspire others), Edge (ability to make decisions), and Execute (being able to complete a job). She also notes two other important leadership qualities as integrity and intelligence (Laramee, 2005).

Leadership can also be developed by professional practitioners in other ways. Young and inexperienced dietetics practitioners can exemplify leadership roles by more clearly calling for role delineation between dietitians and other medical professionals (Gaare, Maillet, King, and Gilbride, 1990; Kane, 1990; and Ross Laboratories, 1992). In research conducted by Gaare et al. (1992), findings indicated that dietitians considered themselves to be the primary decision makers fifty percent of the time, as compared to ten percent of the time by physicians, for decisions concerning nutrition care of patients. Schiller, as referenced in Gaare et al. (pp. 4, 1992) found that sixty-three percent of the time, the chief clinical dietitian felt that staff dietitians had full autonomy, which conflicts with Scialabba's findings, as noted in Gare et al. (pp. 4, 1992) that physicians do not feel that patients' nutrition needs are best provided by an RD.

According to the Proceedings of the Ross Roundtables on Medical Issues, "to build strong leadership in dietetics, a multifaceted approach that spans all levels of professional activity is essential. The approach must involve changing our professional image,

recruitment strategies, educational training, and practice to ensure a supply of leaders who can both create and assume top positions in health care and dietetics." (Ross Laboratories, 1992). The report by Ross Laboratories also concluded that leadership should be encouraged by mentoring young professionals and students through promotion of entrepreneurship, risk-taking, creation of new career ladders, empowerment in workplaces, and networking (1992). Empowerment can be enhanced through promotion of professional accountability (Ross Laboratories, 1992), which can be generated through increases in the RD's responsibility in patient care. In order for this to be accomplished, as well as for strides to be made in the advancement of dietetic practitioners, young professionals and students must all begin and/or continue to improve their leadership skills (Ross Laboratories, 1992).

Professionalism

The last topic of discussion within the realm of leadership in this study is professionalism. Professionalism, like leadership, has been given many definitions. According to the Merriam-Webster OnLine Dictionary, a professional is defined as "characterized by or conforming to the technical or ethical standards of a profession" and "exhibiting a courteous, conscientious, and generally businesslike manner in the workplace" (2005). Continuing on, the definition of ethics is "the discipline dealing with what is good and bad and with moral duty and obligation" and "the principles of conduct governing an individual or group" (Merriam-Webster OnLine Dictionary, 2005). Lastly, the term moral is defined as "of or relating to principles of right or wrong in behavior" and as "conforming to a standard of right behavior" (Merriam-Webster OnLine Dictionary, 2005).

"Ethics, formally defined, is a branch of philosophy that considers questions of personal, organizational and societal judgments" (Terry, pp.136, 1993). "Practicing ethics

does not guarantee professional or personal success, especially if that success is measured in traditional terms of position, power and wealth" (Terry, p153, 1993). "Leadership is logically, experientially and practically expected to be ethical" (Terry, pp. 155, 1993).

According to Nash, as summarized by Komives, Lucas and McMahon (pp. 249, 1998), there are four qualities needed for ethical standards to be advanced in an organization: "1) Critical thinking skills to analyze and convey the ethical components of a problem or dilemma, 2) Possessing a high degree of integrity to stand up for your personal and professional ethics, 3) The ability to see situations from others' perspectives (showing concern for others), and 4) Being personally motivated to do the right thing." Nash also notes that when beginning to use these ethical standards, criticism and revolt may occur initially, as not all members of an organization hold morals in high regard, but that the purpose of instilling core ethical values will lead to construction and long-term maintenance of an ethical environment (Komives et al., 1998).

As discussed by Lucas and Anello, referenced in Komives et al. (1998), ethical leadership is based on eight themes that are central to the practice of ethical leadership:

1. Ethics is the heart of leadership.

2. All leadership is values-driven.

3. The journey to ethical leadership begins with an examination of personal values.

4. Ethical leadership can be learned in a variety of ways.

5. Ethical leadership involves a connection between ethical thought and action.

6. Character development is an essential ingredient of ethical leadership.

7. Ethical leadership is a shared process, not just the leader's responsibility.

8. Everything we do teaches.

Once again, the main goal of developing morals and core values is to define limits for ethical thoughts and actions, ultimately resulting in a definitive stance when ethical questions arise.

Leadership and Professionalism in Dietetics

The ADA's Commission on Accreditation for Dietetics Education (CADE) has developed a foundation of knowledge and skills competency requirements for entry-level dietitians (American Dietetic Association [ADA], 2002). Eight areas comprise the academic components required for students to develop: communications, physical and biological sciences, social sciences, research, food, nutrition, management and health care systems (ADA, 2002). Within these areas, students must gain an understanding of different leadership and professionalism practices. Mastery of the content area of communications requires an understanding of negotiation techniques, lay and technical writing, media presentations, interpersonal communication skills and public speaking, which are demonstrated through use of oral and written communications, counseling individuals and groups, using up-to-date technology to obtain or present information, and working effectively in a group as a team member (ADA, 2002). Understanding of knowledge within the realm of the social sciences requires an understanding of public policy development as well as health behaviors and educational needs of diverse populations (ADA, 2002). The content area of nutrition focuses on improving skills of screening for nutritional risk and determining nutritional needs and in developing culturally/ethnically appropriate menus (ADA, 2002). Management is also an area very dependent on leadership and professionalism, with the CADE requiring knowledge in management theories, human resource management, and

marketing theory and techniques as competency requirements for entry-level dietitians (ADA, 2002).

In addition to the eight content areas, the CADE has also developed core competency statements and emphasis area statements that all entry-level dietitians must have before beginning practice (see Appendix B) (ADA, pp. 3-6, 2002), as well as Standards of Professional Practice, "defined statements of a dietetics professional's responsibility for providing services in all areas of practice" (American Dietetic Association [ADA], 1998). The six standards are defined (ADA, 1998):

1. Provision of Services – providing quality service based on client expectations;

2. Application of Research – effectively applies, participates in or generates research to enhance practice;

3. Communication and Application of Knowledge – effectively applies knowledge and communicates with others;

4. Utilization and Management of Resources – uses resources effectively and efficiently in practice;

5. Quality in Practice – systematically evaluates the quality and effectiveness of practice and revises practice as needed to incorporate the results of evaluation;

6. Continued Competence and Professional Accountability – engages in lifelong self-development to improve knowledge and enhance professional competence.

Each standard has a rationale and indicators set forth for dietetic professional performance, and are impacted by leadership and professionalism practices in some way (ADA, 1998). These specific indicators and rationale are listed in Table 4 (ADA, 1998).

Table 4

Indicators and Rationale for the ADA's Standards of Professional Practice

Standard	Rationale	Indicators
Provision of Services	Provide, facilitate, and promote quality services dependent on present understanding, expectations and needs of clients.	Collaborate with client to assess needs, background, and establish goals; Collaborate with other professionals as needed; Apply knowledge and skills to determine most appropriate plan; Implement quality practice by following policies, procedures, legislation, licensure, and the Standards of Professional Practice; Fosters excellence and exhibits professionalism in practice; Continuously evaluates processes and outcomes; Advocates for the provision of food and nutrition services.
Application of Research	Effective application, support, and generation of dietetics research in practice encourages continuous quality improvement and provides documented support for the client's benefit.	Locates and reviews research finding for application to dietetics practice; Bases practice on sound scientific principles, research and theory; Promotes research through alliances and collaboration with dietetics and other professionals and organizations; Contributes to development of new knowledge and research in dietetics; Collects measurable data and documents outcomes; Shares research data and activities through various media.
Communication and Application of Knowledge	Work with and through others while using their unique knowledge of food, human nutrition, and management.	Has knowledge related to a specific area(s) of professional service; Communicates sound scientific principles, research and theory; Integrates knowledge of food and human nutrition with knowledge of health, social sciences, communication, and management theory; Shares knowledge and information with clients; Helps students and clients apply knowledge and skills; Documents interpretation of relevant information and results of communication with professionals, personnel, students or clients; Contributes to the development of new knowledge; Seeks out information to provide effective services.
Utilization and Management of Resources	Appropriate use of time, money, facilities and human resources facilitates delivery of quality services.	Uses a systematic approach to maintain and manage professional resources; Uses measurable resources such as personnel, guidelines, protocols, and time in the provision of dietetics services; Analyzes safety, effectiveness and cost in planning and delivering services; Justifies use of resources by documenting consistency with plan, continuous quality improvement and desired outcomes; Educates and helps clients and others to identify and secure appropriate and available resources and services.
Quality in Practice	Requires regular performance evaluations and continuous improvement of services.	Identifies performance improvement criteria to monitor effectiveness of services; Identifies expected outcomes; Documents outcomes of services provided; Compares actual performance to expected outcomes; Documents action taken when discrepancies exist between actual performance and expected outcomes; Continuously evaluates and refines services based on measured outcomes.
Continued Competence and Professional Accountability	Requires continuous acquisition of knowledge and skill development to maintain accountability to the public.	Conduct self-assessment at regular intervals to identify professional strengths and weaknesses; Identify needs for professional development and mentor others; Develop and implement a plan for professional growth; Document professional development activities; Adhere to the Code of Ethics for the profession of dietetics and be accountable and responsible for actions and behavior; Support the application of research findings to professional practice; Take active leadership roles.

Conclusion

Research on leadership and professionalism in dietetics is very limited, resulting in a definite need for more examination of these issues. Dietetic professionals and professional organizations are pushing for further development of leadership and professionalism skills of both professionals and students in order to advance the field. Before these strides can be made, more research must be conducted on development of leadership and professionalism in dietetics. Current research in these areas only begins to scratch the surface.

CHAPTER III: METHODOLOGY

Introduction

The overall purpose of this study is to determine if a leadership and professionalism pilot program will improve the leadership and professionalism skills of dietetic students at the University of Wisconsin – Stout. By using individual assessments in combination with observer assessments, this study also seeks to establish validity for the assessments used, with hopes of utilizing the assessments for future research.

Subject Selection and Description

Approval for conducting research was obtained from the UW-Stout Institutional Review Board prior to beginning any subject involvement (Appendix C). Sixty-nine students from the University of Wisconsin-Stout dietetics program were recruited for the study. Students' academic age ranged from freshman to graduate student. Fifty-five of the students only completed assessments and served as a control group. Fourteen of the students completed assessments and participated in the leadership and professionalism development program. All subjects were selected on a volunteer basis, first by being invited to attend an informational meeting, and then by being asked to complete the assessments during class time. Prior to completing any assessments or the program, all students read and completed the informed consent form for the control group or the informed consent form for the experimental group (Appendices D and E). Students participating in the program were also given an informational handout summarizing the study (Appendix F).

Instrumentation

Four individual instruments were utilized for data collection in this study:

1. Demographic Questionnaire (Appendix G): This questionnaire outlines past and present leadership activities, past and current employment, volunteer work, gender, age, and academic status.

2. Student Leadership Practices Inventory (SLPI) (Appendix A): This assessment has been proven valid and is a predictable assessment tool that has been used in numerous studies to determine students' leadership abilities (Kouzes and Posner, 2002). It is an inventory questionnaire based on a five-point scale system to determine frequency of activities related to individual leadership skills.

3. Individual Dietetics Professionalism Assessment (IDPA) (Appendix H): This assessment was developed by Frein (2004) from the American Dietetic Association's Code of Ethics (Appendix I) and is an inventory questionnaire based on a five-point scale system. It was used to determine frequency of self-reported activities relating to professionalism development.

4. Observer Student Leadership Practices Inventory (Observer sLPI) (Appendix J): This assessment is the same tool as the individual sLPI, except it takes the same questionnaire and asks an observer's viewpoint of a student leader on the same leadership abilities.

Data Collection Procedures

All sixty-nine students (experimental and control groups) in the study completed a Demographic Questionnaire, SLPI, and IDPA prior to the start of the Leadership and Professionalism Development Program and following its conclusion. Students in the experimental group filled out the assessments prior to the start of the program on October 26, 2004 at the initial informational session, and completed the assessments a second time

following completion of the program at a wrap-up session held on May 11, 2005. Students in the control group filled out the initial set of assessments between January 24, 2005 and February 4, 2005 (prior to the start of the program). The final sets of assessments were filled out by the control group during the time period of April 29, 2005 to May 11, 2005 (following completion of the program). Lastly, the Observer SLPIs were completed by observers of each member of the experimental group from April 29, 2005 to May 13, 2005. Each student in the experimental group chose two observers with whom they had previously or currently worked with closely at school or work. One observer was expected to have played a supervisory role with the student and the other observer was expected to have played a peer or co-worker role with the student.

During the time period between the initial and final assessments, students in the experimental group participated in a Leadership and Professionalism Development Program. The program included attendance at three conferences: the M.I.L.E.S. Leadership Conference (held on the University of Wisconsin-Stout Campus, Menomonie, WI, on February 19, 2005), a leadership and professionalism development seminar (held on the University of Wisconsin-Stout campus, Menomonie, WI, on March 4, 2005), and the Wisconsin Dietetic Association State Meeting poster session (at Eau Claire, WI, on April 28, 2005). Experimental group subjects also developed and presented media projects (individually, or in groups of two) on a dietetic topic of the subject's choice at the WDA poster session, and at the University of Wisconsin-Stout's Research Day.

The M.I.L.E.S. Leadership Conference (see appendix K) is a leadership conference offered to students at the University of Wisconsin-Stout, aimed at improving leadership skills to enhance professional development of students. This particular conference offered

workshops relating to diversity and workplace communication, some of which were presented by University of Wisconsin-Stout alumni.

The Dietetics Leadership and Professionalism Development Workshop was directed by Mary McManus, Assistant Director of University Centers at the University of Wisconsin-Stout. This seminar was a four hour session broken down into the components of SLPI and leadership theory, media presentation, values and ethics (see Appendix L for a summary of handouts used in the session).

The Wisconsin Dietetic Association (WDA) state meeting is a conference for professionals and students involved in the WDA. It is focused on educating attendees about nutrition-related issues, fostering professional development, and building relationships between dietetic professionals and/or students. Students in the experimental group were required to attend the poster session at this meeting and develop and present on a nutrition topic of their choice (see Appendix M). Subjects were also encouraged to attend other conference sessions, and the student and professional mentor/mentee luncheon.

The media project presentation involved student research on an individually chosen nutrition topic and presentation of this topic for the public to see and/or hear. The purpose of this project focused on improving technological development in presentation skills, as well as communication, public education, and professional skills.

Data Analysis

Data was analyzed using SPSS version 11.5 for Windows and JMP (SAS) version 6.0 for Windows. Means and standard deviations were calculated for demographic data, SLPI scores and IDPA scores. Independent samples t-tests were run to determine any significant differences between control and experiment groups for the demographic questionnaire, and

pre and post-program sLPI and IDPA scores. Two-sample t-tests were calculated to determine differences in age or gender of control and experimental groups and a Pearson Chi-square test was used to determine differences in number of credits completed and left to complete. A Fisher's Exact test was also used to examine any differences in classification of students.

Independent samples t-tests were calculated to determine any differences pre-program implementation with respect to the total number of activities participants had previously been involved. A Wilcoxon Rank Sum test was calculated to determine any differences for specific groupings of students (gender, academic status). Matched paired t-tests were also calculated to examine any differences in scoring between observer and experimental groups on scoring of the sLPI post-program. ANCOVA was used to examine if there was significant change between control and experimental groups from pre-program to post-program SLPI scores and Chronbach's Alpha was used to examine internal reliability of the SLPI and IDPA. Lastly, multivariate correlations were run to determine any relationships between the SLPI, IDPA and demographic data.

Limitations

Potential limitations of the study include:

1. Data gathered for the study consisted only of dietetic students from the University of Wisconsin-Stout, one dietetics program in the United States;

2. Students choosing to participate in the leadership and professionalism development program were self-selected as volunteers. These students may already have stronger leadership and professionalism skills because they sought out opportunities to improve their skills.

3. Timing of the administration of assessment; the experimental group took the initial assessments on October 26, 2004, whereas the control group took the initial assessments during the timeframe of January 24, 2005 and February 4, 2005. Initially, all students, both control and experimental, were to take the initial assessments in the fall, but out of concern for withdrawal, researchers decided to conduct the program over the period of one semester instead of one year. Subjects in the control group were then much more easily accessible, as they could be visited and asked for participation while in the same class at the beginning and end of one semester only.

4. Effectiveness of the M.I.L.E.S. Leadership Conference. Speakers at this conference vary dependent on the year. Based on verbal feedback from subjects as well as other attendees, the speakers at the 2005 conference were not very influential speakers, with the exception of one. Also, subjects were given the option to choose which sessions they wanted to attend, resulting in varied experiences for each of the subjects.

5. Attendance at the WDA poster session was required for all experimental subjects, but attendance for the remainder of the conference was dependent on the individual. Therefore, subjects may have attended different sessions (if any) when compared to other experimental and control subjects.

6. All experimental subjects were required to attend the WDA conference, while no requirement was set for control subjects. Six of the fifty-five control subjects also attended the WDA conference, which may have provided them with some of the same experiences that experimental subjects participated in.

CHAPTER IV: RESULTS

Results

This study attempted to determine if implementation of a leadership and

professionalism development program in the Dietetics Program at the University of

Wisconsin-Stout will meet the expressed need of dietetic students by fostering growth in

leadership and professionalism practices. Student self-reports of leadership and

professionalism were examined prior to and following participation in the leadership and

professionalism program by control and experimental groups to determine if the Student

Leadership Practices of Challenging the Process, Inspiring a Shared Vision, Enabling Others

to Act, Modeling the Way and Encouraging the Heart were affected through participation in

the program (Kouzes & Posner, 1987).

The initial experimental group contained twenty-two participants. Eight of these

participants dropped out of the experimental group before taking part in any of the leadership

or professionalism development sessions or conferences. Independent Samples t-tests were

run between the eight participants who dropped out of the experimental group (special) and

the control group to determine if there were any significant differences between the two

group's scores on the Student Leadership Practices (SLPI) and the Independent Dietetic

Professionalism Assessment (IDPA) and are discussed below.

On the demographic questionnaire (see Appendix G), there were two items that had

statistical differences between the control group and the special drop-out group, both from

the post-program assessments. The question "How many volunteer experiences have you

been involved with to date?" was significantly higher with mean scores for control and

special groups being 2.87 (SD=2.593) and 4.88 (SD=2.475), respectively. The second

question that had significance was "How many professional organization meetings have you attended?" with the mean scores of the control and special groups being of 2.23 (SD=3.094) and 4.88 (SD=3.523), respectively.

On the SLPI (refer to Appendix A), there were no significant differences between the control and special drop-out group on the pre-program test and there was only one significant difference found between the two on the post-program test. For the statement "I look ahead and communicate about what I believe will affect us in the future," mean scores for the control group and special group were 3.55 (SD=1.059) and 4.50 (SD=.535) respectively.

On the IDPA (see Appendix H), there were also very few significant items between the control group and the special group. On the pre-program assessment, there was only one item that was found to have statistical significance between the control group and the special drop-out group. For the statement "I do not advertise services or products using false or misleading information," with mean scores for control group and special group being 4.69 (SD=.766) and 5.00 (SD=.000), respectively (scale for means: 1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost always). On the post-program assessment, there was one item that was statistically significant between the control and special group: the statement "I let others explore, take risks and make decisions" had mean scores of 3.98 (SD=.766) and 4.63 (SD=.518) for the control and special group, respectively (scale for means: 1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost always).

Between all three assessments, (pre-program), there was only one item that was found to be statistically significant, and only four items were found to have statistical significance post-program between the control and special groups. Because of such minimal differences,

the control group and special group were combined. For the remainder of the results and discussion, the "control group" is assumed to be the control group plus the special group.

The initial control group contained 62 respondents who completed the pre- program assessments. Due to attrition rates, post-program assessments that were distributed and completed by the control group and netted a total of 55 post-program assessments to be matched with the pre-program assessments.

Demographic Data

A total of 69 subjects had full participation in the study from start to finish. The mean age of all participants in the study pre-program was 22.87 years (SD = 5.98). Age range of participants pre-program was from 18 years old to 48 years old. The ages of the experimental group ranged from 18-48 and control group from 20-44 years old. The mean age of all participants in the study (post-program) was 23.29 years (SD = 6.00). A two-sample t-test was run to determine if the mean of the experimental group differed from the control group prior to the start of the program. No significant differences were found of mean age between experimental and control group pre-program using a two-sample t-test.

In the gender category, 7 (10.1%) of the total subjects in the study were male and 62 (89.9%) were female. In the experimental group, 1 (7.7%) subject was male and 13 (92.3%) subjects were female. In comparison, the control group had 6 (12.2%) males and 49 (97.8%) females. A two-sample t-test was used to determine if there were gender differences between the control and experimental groups. No significant differences were found.

Pre-program data indicates that classification of student subject totals pre-program were 4 graduates (5.8%) and 65 undergraduates (92.4%). Within the control group, 3 subjects were graduate students (5.8%) and 52 were undergraduate students (94.2%). The

experimental group had 1 graduate student (7.7%) and 13 undergraduate students (92.3%).

Using a Fisher's Exact Test, no significant differences were found between the control and

experimental group for student classification.

Post-program data indicates that type of student subject totals were 4 graduate (5.8%)

and 65 undergraduate (92.4%). Within the control group, 4 subjects were graduate students

(7.8%) and 52 were undergraduate students (92.2%). The experimental group had 1 graduate

student (7.7%) and 13 undergraduate students (92.3%). Therefore the experimental group

remained unchanged and the control group had one student switch from classification of

undergraduate to graduate status. No significant differences were found between the control

and experimental group post-program.

Demographic data gathered on total credits completed to date for all subjects pre-

program were grouped from 0-20 credits, 21-40 credits, 41-60 credits, 61-80 credits, 81-100

credits, 101-120 credits and 120+ credits. Graduate students were also placed in the

corresponding groups based on credits earned towards a dietetic degree, regardless of

previous coursework. The entire group's pre-program percentage frequencies were 10, 3, 12,

7, 11, 12 and 14, respectively. Percentages for groupings of all subjects are listed in

Figure 2.
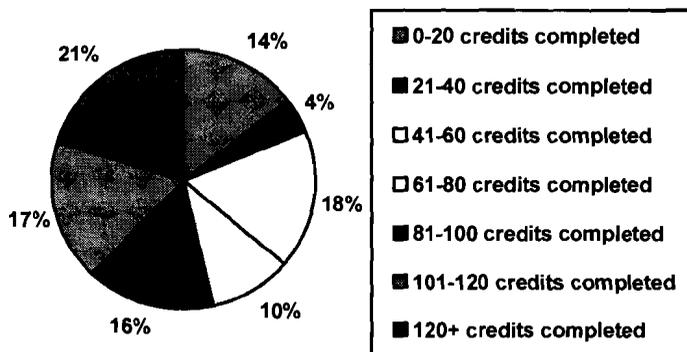
Figure 2. Percentage of Number of Credits Completed for Total Group Pre-Program
Participating in the Leadership and Professionalism Study (n = 69)

Demographic data gathered on total credits completed to date for the control group pre-

program were grouped from 0-20 credits, 21-40 credits, 41-60 credits, 61-80 credits, 81-100

credits, 101-120 credits and 120+ credits. The group's percentage frequencies were 10, 3, 7,

6, 10, 10, and 9, respectively and are displayed in Figure 3.
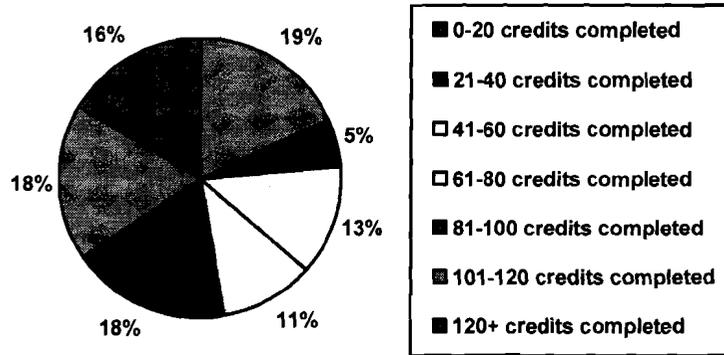
Figure 3. Percentage of Number of Credits Completed for the Control Group Pre-Program
Participating in the Leadership and Professionalism Study (n = 55).

Demographic data gathered on total credits completed to date for the experimental group pre-

program were grouped from 0-20 credits, 21-40 credits, 41-60 credits, 61-80 credits, 81-100

credits, 101-120 credits and 120+ credits. The group's percentage frequencies were 0, 0, 5,

1, 1, 2, and 5, respectively and are displayed in Figure 4.
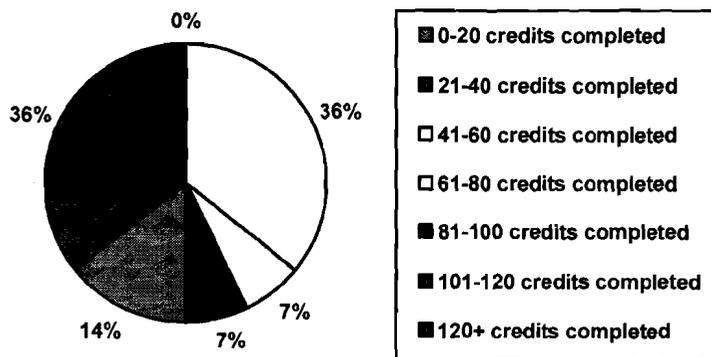
Figure 4. Percentage of Number of Credits Completed for the Experimental Group Pre-
Program Participating in the Leadership and Professionalism Study (n = 14).

Comparison of the control group and the experimental group with respect to total number of credits completed pre-program is shown in Figure 5.
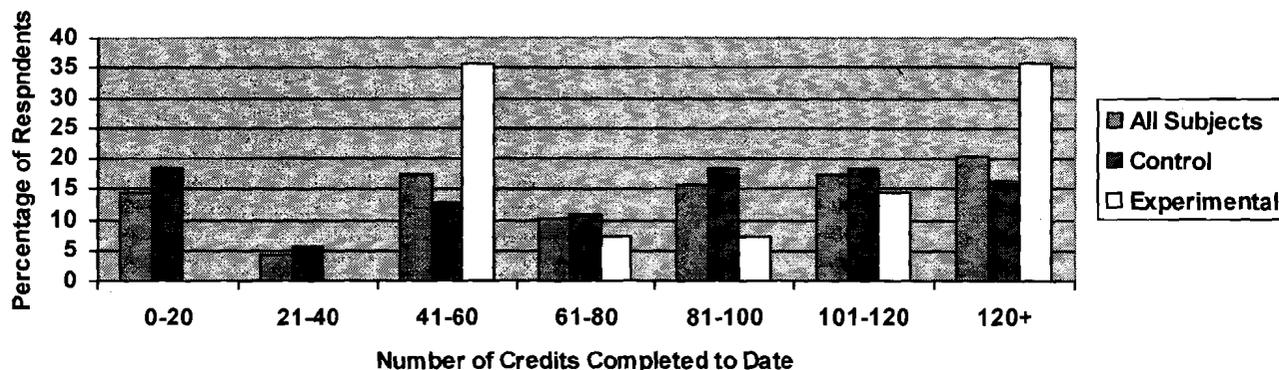
Figure 5. Comparison of Percentage of Number of Credits Completed to Date for All Subjects, Control Group and Experimental Group Pre-Program Participating in the Leadership and Professionalism Development Study.

A Pearson Chi-Squared test was run to determine significance for number of credits completed to date between the control group and the experimental group, pre-program, but found no statistical differences between the two groups.

Subjects also self-reported the number of credits left to complete to date on the pre-program demographic questionnaire. Once again, graduate students were also placed in the corresponding groups based on credits earned towards a dietetic degree, regardless of previous coursework. A summary of this data for all subjects (n = 69), control group (n = 55) and experimental group (n = 14) is found in Figure 6.
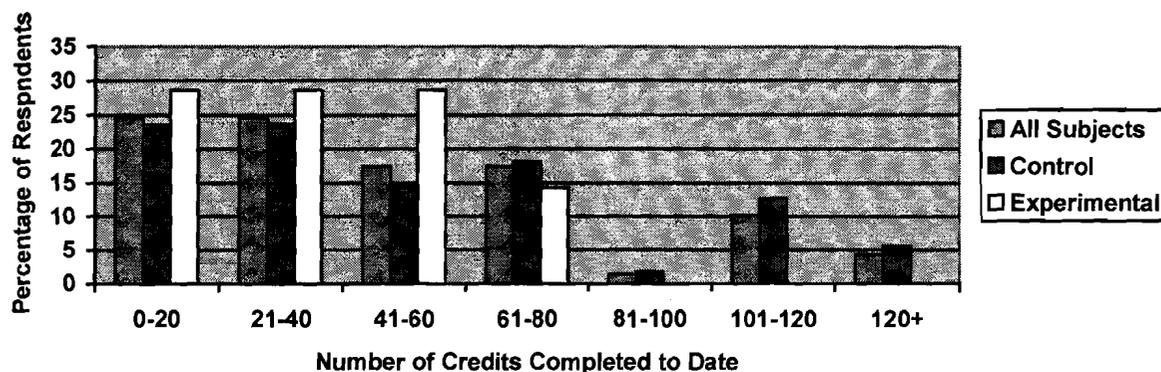
Figure 6. Comparison of Percentage of Number of Credits Left to Complete to Date for All Subjects, Control Group and Experimental Group Pre-Program Participating in the Leadership and Professionalism Development Study.

A Pearson Chi-Squared test was run to determine significance for number of credits left to complete between the control group and the experimental group, pre-program, but there were no statistical differences between the two groups.

The last section of the Demographic Questionnaire (Appendix G) (questions six through twelve) contained a frequency checklist for various activities that subjects have been involved in to date including organizations (clubs, professional organizations, student organizations, intramurals, committees etc.), work experiences (paid and unpaid), volunteer experiences, service projects, honors and awards (academic, athletic, service), leadership and professionalism training programs, and professional organization meetings. Options listed for frequency in the pre-program demographic questionnaire are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10+. Independent samples t-tests were run on the pre-program questionnaire and yielded only one significant finding between the control and experimental group. Question ten, 'How many honors or awards have you received to date?' yielded a lower mean score for the control than the experimental group with means of 3.57 (SD=2.73) and 6.00 (SD=3.01), respectively. In addition to individual scores being analyzed, a composite score was generated by adding up the individual total involvement scores of questions 6 through 12 on

the demographic questionnaire (Appendix G) to determine significance on the subjects' total involvement in activities. As a result of statistical significance for the question 10 "How many honors or awards have you received to date?", a total score for responses of 6, 7, 8, 9, 11, and 12 (omitting question 10 from the demographic questionnaire (Appendix G) to determine if there are any differences when compared to the total involvement score pre-program with question 10 included. T-tests were run with M = 19.38 (SD = 9.56) for the control group and M = 24.43 (SD = 10.93) for the experimental group for composition scores for total activities. The composite scores for total activities, excluding honors and awards, yielded an M = 15.87 (SD = 8.06) for the control group and M = 18.43 (SD = 9.30) for the experimental group. No significant differences were found between control and experimental groups for either composite score. One other mentionable pre-program value was the score for question eleven, 'How many leadership and/or professionalism training programs have you previously attended?" The p-value for the number of leadership and professionalism training programs had a tendency for difference $t(65) = 1.97$, $p = .053$, but was not statistically significant. The mean values were 1.51 (SD=1.303) and 2.33 (SD=1.371) for control and experimental groups, respectively.

Two additional questions were added to the post-program Demographic Questionnaire: 13) "How many leadership seminars/conferences/courses did you attend during the 2005 spring semester?" and 14) "How many professionalism seminars/conferences/courses did you attend during the 2005 spring semester?" In addition to adding two extra questions, frequency scales for questions six through fourteen were changed before analyses from (1-10+) to (0 to 9+) to ensure that all measures were being represented. Independent samples t-tests were run on the post-program Demographic

Questionnaire and seven of these questions yielded significant differences between control

and experimental groups. Results of the post-program Demographic Questionnaire,

questions six through fourteen are listed in Table 5. Means were found to be significantly

higher for the experimental group when compared to the control group for questions six,

eight, nine, ten, eleven, thirteen and fourteen.

Table 5

Post-Program Responses of Control and Experimental Groups for Questions Six through
Fourteen on the Demographic Questionnaire for the Leadership and Professionalism
Development Program Study

Question	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
6. How many organizations have you been involved with in your college career?	2.80	2.14	4.64	2.71	67	**2.73**	**.01**
7. How many work experiences have you obtained?	3.69	2.13	3.71	2.76	67	.035	NS
8. How many volunteer experiences have you been involved in to date?	3.16	2.65	5.86	3.09	67	**3.28**	**.01**
9. How many service projects have you taken part in?	1.89	2.24	4.07	3.32	16	**2.33**	**.05**
10. How many honors or awards have you received?	3.15	2.46	5.00	2.60	67	**2.47**	**.05**
11. How many leadership and/or professionalism training programs have you attended?	1.18	1.66	3.14	3.18	15	**2.23**	**.05**
12. How many leadership and professional organizational meetings have you attended?	2.62	3.26	4.00	3.04	67	1.43	NS
13. How many leadership seminars/conferences/course did you attend during the 2005 spring semester?	0.31	0.66	2.57	0.94	67	**10.43**	**.001**
14. How many professionalism seminars/conferences/courses did you attend during the 2005 spring semester?	0.25	0.55	2.36	1.34	14	**5.76**	**.001**

Note. M = mean score of activities participated in; minimum score = 1; maximum score = 9+. SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for $p < .05$.

Independent Dietetics Professionalism Assessment (IDPA)

Mean scores and standard deviations were calculated prior to the start of the

Leadership and Professionalism Development Program for individual IDPA questions

(Appendix H), as well as for the combined total of the 24 questions on the IDPA, and are

listed in table 6. Independent samples t-tests were run on the individual and combined total

responses for the control and experimental groups and are also listed in Table 6. Items that

were found to be significantly higher for the experimental group (pre-treatment), include the

following: "I continually strive to increase my knowledge and skills" (t (31) = 2.37, p < .05),

"I recognize sound judgment when making decisions" (t(67) = 1.83, p < .001), "I am alert to

situations that contain the potential for conflict of interest and will provide full disclosure

when one such situation arises" (t(63) = 2.76, p < .01), and "I inform public and peers

through use of factual information" (t(62) = 2.43, p < 2.43).

Table 6

Mean Responses and Independent Samples T-Test of the Pre-Program IDPA for Control and Experimental Groupings

Professionalism Statement	Control (n = 55)		Experimental (n = 4)		df	t	P
	M	SD	M	SD			
I am honest when working with others.	4.73	.49	4.79	.43	67	.41	NS
I am fair when working with others.	4.73	.53	4.80	.43	67	.39	NS
I let others explore, take risks and make decisions.	4.13	.70	4.36	.75	67	1.09	NS
I conduct my actions with a high level of integrity and set an example of what I would expect.	4.24	.64	4.29	.61	67	.26	NS
I act on the basis of scientific principles and current information.	3.87	.64	4.57	.66	67	1.40	NS
I understand differences of opinion exist, but do not subject interpretation of controversial information to personal bias.	3.98	.85	4.79	.91	67	1.18	NS
I listen and support ideas of others and strive to foster cooperative relationships.	4.56	.54	4.57	.51	67	.05	NS
I assume responsibility and accountability for my personal competence in dietetics.	4.69	.47	4.79	.43	66	.73	NS
I continually strive to increase my knowledge and skills.	4.56	.57	4.86	.36	31	**2.37**	**.05**
I consistently apply my knowledge and skills.	4.31	.61	4.64	.63	67	1.83	NS
I recognize sound judgment when making decisions.	4.22	.60	4.79	.43	67	**3.33**	**.001**
I collaborate with others or make referrals when information is beyond the limits of my qualifications.	4.40	.68	4.29	.83	67	.53	NS
I provide sufficient information to others to enable them to make informed choices.	4.36	.56	4.43	.65	66	.38	NS
I respect personal information and provide full confidentiality when obtaining information about others.	4.63	.59	4.79	.43	57	.92	NS
I provide nutrition information with respect to unique needs and values of individuals.	4.29	.79	4.57	.65	31	1.22	NS

Note. M=mean score of responses (1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost always). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05.
* signifies M = mean for total of score from the IDPA (range from 24-120).

Table 6 Continued

Mean Responses and Independent Samples T-Test of the Pre-Program IDPA for Control and Experimental Groupings

Professionalism Statement	Control (n = 55)		Experimental (n = 4)		df	t	P
	M	SD	M	SD			
I am consistently sensitive to any cultural differences, with no discrimination in regards to age, disability, creed, ethnicity, nationality, race, religion, gender or sexual orientation.	4.58	.66	4.80	.43	67	1.41	NS
I do not engage in any form of sexual harassment in connection to my role as a dietetics student.	4.87	.58	5.00	.00	67	.82	NS
I provide objective evaluations of performance for others.	4.31	.73	4.69	.63	56	1.1	NS
I am alert to situations that contain the potential for conflict of interest and will provide full disclosure when one such situation arises.	4.18	.68	4.71	.47	63	2.76	.01
I inform public and peers through use of factual information.	4.18	.63	4.64	.63	62	2.43	.05
I do not advertise services or products using false or misleading information.	4.74	.71	4.86	.36	58	.59	NS
I accurately present my professional qualifications and credentials.	4.59	.62	4.58	.52	54	.04	NS
I comply with all applicable laws and regulations concerning the profession of dietetics.	4.62	.62	4.73	.65	54	.50	NS
I promote the high standards of my future role in dietetics by accepting obligation to peers, the public and the profession of dietetics.	4.69	.64	4.71	.47	64	.12	NS
Total score for all questions*	106.3	.33	111.1	.35	67	1.94	NS

Note. M=mean score of responses (1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost always). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for $p < .05$.
* signifies M = mean for total of score from the IDPA (range from 24-120).

Mean scores and standard deviations were calculated following the conclusion of the Leadership and Professionalism Development Program for individual IDPA questions, as well as for the combined total of the 24 questions on the IDPA, and are listed in Table 7. Independent samples t-tests were run on the individual and combined total responses for the control and experimental groups and are also listed in Table 7. Items that were found to be significantly higher for experimental group, post-treatment, included "I let others explore, take risks and make decisions," "I understand differences of opinion exist, but do not subject interpretation of controversial information to personal bias," "I continually strive to increase

my knowledge and skills," "I provide nutrition information with respect to unique needs and

values of individuals," "I comply with all applicable laws and regulations concerning the

profession of dietetics," and "I promote the high standards of my future role in dietetics by

accepting obligation to peers, the public and the profession of dietetics," according to

Table 7.

Table 7

Mean Responses and Independent Samples T-Test of the Post-Program IDPA for Control and
Experimental Groupings

Professionalism Statement	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I am honest when working with others.	4.85	.36	4.71	.47	17	.310	NS
I am fair when working with others.	4.78	.46	4.86	.37	67	.571	NS
I let others explore, take risks and make decisions.	4.07	.77	4.64	.50	67	**.010**	**.01**
I conduct my actions with a high level of integrity and set an example of what I would expect.	4.35	.73	4.57	.65	67	.292	NS
I act on the basis of scientific principles and current information.	4.04	.69	4.36	.75	64	.134	NS
I understand differences of opinion exist, but do not subject interpretation of controversial information to personal bias.	4.15	.73	4.57	.51	67	**.044**	**.05**
I listen and support ideas of others and strive to foster cooperative relationships.	4.62	.53	4.80	.43	24	.224	NS
I assume responsibility and accountability for my personal competence in dietetics.	4.60	.53	4.71	.47	65	.481	NS
I continually strive to increase my knowledge and skills.	4.56	.54	4.86	.36	29	**.022**	**.05**
I consistently apply my knowledge and skills.	4.38	.68	4.57	.65	67	.351	NS
I recognize sound judgment when making decisions.	4.31	.58	4.64	.50	66	.056	NS
I collaborate with others or make referrals when information is beyond the limits of my qualifications.	4.34	.77	4.50	.65	62	.482	NS
I provide sufficient information to others to enable them to make informed choices.	4.24	.67	4.50	.52	66	.184	NS
I respect personal information and provide full confidentiality when obtaining information about others.	4.75	.52	4.71	.47	65	.791	NS
I provide nutrition information with respect to unique needs and values of individuals.	4.46	.75	4.79	.43	39	**.045**	**.05**
I am consistently sensitive to any cultural differences, with no discrimination in regards to age, disability, creed, ethnicity, nationality, race, religion, gender or sexual orientation.	4.64	.62	4.86	.36	35	.094	NS

Note. M=mean score of responses (1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost always). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean for total of score from the IDPA (range from 24-120).

Table 7 Continued

Mean Responses and Independent Samples T-Test of the Post-Program IDPA for Control and
Experimental Groupings

Professionalism Statement	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I do not engage in any form of sexual harassment in connection to my role as a dietetics student.	4.91	.56	5.00	.00	66	.540	NS
I provide objective evaluations of performance for others.	4.42	.72	4.57	.51	64	.475	NS
I am alert to situations that contain the potential for conflict of interest and will provide full disclosure when one such situation arises.	4.33	.68	4.50	.52	63	.401	NS
I inform public and peers through use of factual information.	4.26	.79	4.50	.65	65	.307	NS
I do not advertise services or products using false or misleading information.	4.65	.69	4.86	.36	42	.149	NS
I accurately present my professional qualifications and credentials.	4.60	.66	4.85	.38	36	.104	NS
I comply with all applicable laws and regulations concerning the profession of dietetics.	4.66	.61	4.93	.27	50	.024	.05
I promote the high standards of my future role in dietetics by accepting obligation to peers, the public and the profession of dietetics.	4.65	.56	4.93	.27	45	.012	.05
Total score for all questions*	107.5	.38	118.3	.27	65	.051	NS

Note. M=mean score of responses (1=Rarely, 2=Once in a while, 3=Sometimes, 4=Quite often, 5=Almost
always). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for $p < .05$. *
signifies M = mean for total of score from the IDPA (range from 24-120).

The Wilcoxon Rank Sum test was also used to examine the IDPA pre-program and

yielded one significant finding: graduate student's total scores on the IDPA pre-program

were found to be significantly higher than undergraduate student's total scores ($p = .028$),

with M = 113.25 (SD = 3.77) and M = 102.20 (SD = 10.91), respectively for graduate scores

and undergraduate scores.

Student Leadership Practices Inventory

Mean scores, standard deviations, and independent samples t-tests were calculated

prior to the start of the Leadership and Professionalism Development Program for individual

SLPI questions, for the five groupings of Leadership practices (Enable others to act, Model

the way, Encourage the heart, Inspire a shared vision, and Challenge the process), as well as

into groups of questions comprising the five leadership practices groups, and are listed in

Tables 8, 9, 10, 11, 12, 13, and 14, respectively. The only question found to be statistically

significant lower for the control group when compared to the experimental group, pre-

program, was "I break our organization's projects down into manageable steps" (Table 8),

and for the grouping of Enabling Others to Act (Table 9). Tables ten through fourteen show

leadership practices with the individual leadership groupings: Challenging the Process,

Inspiring a Shared Vision, Enabling Others To Act, Modeling the Way and Encouraging the

Heart, respectively, with p-values.

Table 8

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for
Individual Questions

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I look for opportunities that challenge my skills and abnormalities.	3.65	1.04	3.86	1.10	67	.65	NS
I describe to others in our organization what we should be capable of accomplishing.	3.25	0.93	3.64	1.15	67	.133	NS
I include others in planning the activities and programs of our organization.	3.71	1.13	4.29	.90	67	1.76	NS
I share my beliefs about how things can be run most effectively within our organization.	3.60	1.01	3.93	1.07	67	1.07	NS
I encourage others as they work on activities and programs in our organization.	4.09	.95	4.50	.52	67	1.55	NS
I keep current on events and activities that might affect our organization.	3.55	.96	3.79	1.12	67	.81	NS
I look ahead and communicate about what I believe will affect us in the future.	3.56	1.05	3.93	1.00	67	1.17	NS
I treat others with dignity and respect.	4.87	.34	4.86	.36	67	.15	NS
I break our organization's projects down into manageable steps.	3.38	1.05	4.14	.77	67	**2.55**	**.05**
I make sure that people in our organization are recognized for their contributions.	3.84	1.12	4.43	1.16	67	1.76	NS
I take initiative in experimenting with the way we do things in our organization.	3.07	1.09	3.57	1.22	67	1.50	NS
I am upbeat and positive when talking about what our organization in doing.	4.27	.91	4.57	.65	67	1.15	NS
I support the decisions that other people in our organization make on their own.	4.04	.88	4.50	.65	67	1.84	NS
I set a personal example of what I expect from other people.	4.18	.84	4.29	.91	67	.41	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05.

Table 8 Continued

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for Individual Questions

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I praise people for a job well done.	4.40	.81	4.50	.65	67	.43	NS
I look for ways to improve whatever project or task I am involved in.	4.18	.67	4.50	.52	67	1.65	NS
I talk with others about how their own interests can be met by working toward a common goal.	3.44	1.09	4.00	1.18	67	1.71	NS
I foster cooperative rather than competitive relationships among people I work with.	4.18	.77	4.50	.52	67	1.46	NS
I talk about the values and principles that guide my actions.	3.85	.93	3.86	.95	67	.01	NS
I give people in our organization support and express appreciation for their contributions.	4.24	.94	4.57	.65	67	1.25	NS
I ask "What can we learn from this experience?" when things do not go as we expected.	3.56	1.03	.86	.86	67	.98	NS
I speak with conviction about the higher purpose and meaning of what we are doing.	3.80	1.13	3.86	.66	35	.25	NS
I give others a great deal of freedom and choice in deciding how to do their work.	3.98	.85	4.36	.63	67	1.54	NS
I follow through on the promises and commitments I make in this organization.	4.18	.84	4.43	.76	67	1.00	NS
I find ways for us to celebrate our accomplishments publicly.	3.29	1.26	3.43	1.02	67	.38	NS
I let other experiment and take risks even when outcomes are uncertain.	3.51	.96	3.71	.73	67	.75	NS
I show my enthusiasm and excitement about what our organization is doing.	4.11	.96	4.50	.76	67	1.42	NS
I provide opportunities for other to take on leadership responsibilities.	3.76	1.04	4.07	1.07	67	.99	NS
I make sure that we set goals and make specific plans for the projects we undertake.	3.73	.85	4.07	1.21	67	1.24	NS
I make it a point to tell other about the good work done by our organization.	3.95	1.06	4.29	.83	67	1.11	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05.

Table 9

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for the Five Leadership Practices

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Challenging the Process.	21.53	3.93	23.29	4.16	67	1.48	NS
Inspiring a Shared Vision.	22.44	4.32	24.50	4.24	67	1.60	NS
Enabling Others to Act.	24.55	3.35	26.57	2.65	67	**2.10**	**.05**
Modeling the Way.	22.93	4.00	24.71	4.48	67	1.46	NS
Encouraging the Heart.	23.80	5.02	25.71	3.63	67	1.34	NS

Note: SD = standard deviation. NS = Not Significant for $p < .05$. M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 10

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for Challenging the Process

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Challenging the Process*	21.53	3.93	23.29	4.16	67	1.48	NS
I look for opportunities that challenge my skills and abnormalities.	3.65	1.04	3.86	1.10	67	.64	NS
I keep current on events and activities that might affect our organization.	3.55	.96	3.79	1.12	67	.81	NS
I take initiative in experimenting with the way we do things in our organization.	3.07	1.09	3.57	1.22	67	1.50	NS
I look for ways to improve whatever project or task I am involved in.	4.18	.67	4.50	.52	67	1.65	NS
I ask "What can we learn from this experience?" when things do not go as we expected.	3.56	1.03	.86	.86	67	.98	NS
I let other experiment and take risks even when outcomes are uncertain.	3.51	.96	3.71	.73	67	.75	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for $p < .05$. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 11

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for
Inspiring a Shared Vision

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Inspiring a Shared Vision	22.44	4.32	24.50	4.24	67	1.60	NS
I describe to others in our organization what we should be capable of accomplishing.	3.25	0.93	3.64	1.15	67	1.33	NS
I look ahead and communicate about what I believe will affect us in the future.	3.56	1.05	3.93	1.00	67	1.17	NS
I am upbeat and positive when talking about what our organization in doing.	4.27	.91	4.57	.65	67	1.15	NS
I talk with others about how their own interests can be met by working toward a common goal.	3.44	1.09	4.00	1.18	67	1.70	NS
I speak with conviction about the higher purpose and meaning of what we are doing.	3.80	1.13	3.86	.66	35	.25	NS
I show my enthusiasm and excitement about what our organization is doing.	4.11	.96	4.50	.76	67	1.42	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for $p < .05$. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 12

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for
Enabling Others to Act

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Enabling Others to Act*	24.55	3.35	26.57	2.65	67	**2.10**	**.05**
I include others in planning the activities and programs of our organization.	3.71	1.13	4.29	.90	67	1.76	NS
I treat others with dignity and respect.	4.87	.34	4.86	.36	67	.15	NS
I support the decisions that other people in our organization make on their own.	4.04	.88	4.50	.65	67	1.84	NS
I foster cooperative rather than competitive relationships among people I work with.	4.18	.77	4.50	.52	67	1.46	NS
I give others a great deal of freedom and choice in deciding how to do their work.	3.98	.85	4.36	.63	67	1.54	NS
I provide opportunities for other to take on leadership responsibilities.	3.76	1.04	4.07	1.07	67	.99	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for $p < .05$. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 13

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for
Modeling the Way

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Modeling the Way*	22.93	4.00	24.71	4.48	67	1.46	NS
I share my beliefs about how things can be run most effectively within our organization.	3.60	1.01	3.93	1.07	67	1.07	NS
I break our organization's projects down into manageable steps.	3.38	1.05	4.14	.77	67	**2.55**	**.05**
I set a personal example of what I expect from other people.	4.18	.84	4.29	.91	67	.41	NS
I talk about the values and principles that guide my actions.	3.85	.93	3.86	.95	67	.01	NS
I follow through on the promises and commitments I make in this organization.	4.18	.84	4.43	.76	67	1.00	NS
I make sure that we set goals and make specific plans for the projects we undertake.	3.73	.85	4.07	1.21	67	1.24	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 14

Means and Independent Samples T-Tests of Pre-Program Responses on the SLPI for
Encouraging the Heart

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Encouraging the Heart*	23.80	5.02	25.71	3.63	67	1.34	NS
I encourage others as they work on activities and programs in our organization.	4.09	.95	4.50	.52	67	1.55	NS
I make sure that people in our organization are recognized for their contributions.	3.84	1.12	4.43	1.16	67	1.76	NS
I praise people for a job well done.	4.40	.81	4.50	.65	67	.43	NS
I give people in our organization support and express appreciation for their contributions.	4.24	.94	4.57	.65	67	1.25	NS
I find ways for us to celebrate our accomplishments publicly.	3.29	1.26	3.43	1.02	67	.38	NS
I make it a point to tell other about the good work done by our organization.	3.95	1.06	4.29	.83	67	1.11	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Mean scores, standard deviations, and independent samples t-tests were calculated at

the conclusion of the Leadership and Professionalism Development Program for individual

SLPI questions, for the five groupings of Leadership practices (Enable others to act, Model the way, Encourage the heart, Inspire a shared vision, and Challenge the process), as well as into groups of questions comprising the five leadership practices groups, and are listed in Tables 15, 16, 17, 18, 19, 20, and 21, respectively. The majority of individual items were found to be statistically greater for the experimental group, and all of the five groupings of Leadership Practices were found to have statistical significance with the experimental exhibiting higher values than the control group.

Table 15

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I look for opportunities that challenge my skills and abnormalities.	4.02	.85	4.21	.70	67	.80	NS
I describe to others in our organization what we should be capable of accomplishing.	3.53	1.07	4.21	.70	67	2.28	.05
I include others in planning the activities and programs of our organization.	3.84	1.07	4.57	.70	67	2.56	.05
I share my beliefs about how things can be run most effectively within our organization.	3.75	1.00	4.57	.65	67	2.92	.01
I encourage others as they work on activities and programs in our organization.	4.02	1.11	4.64	.50	48	3.12	.01
I keep current on events and activities that might affect our organization.	3.62	.99	4.14	.77	67	1.84	NS
I look ahead and communicate about what I believe will affect us in the future.	3.69	1.05	4.21	.89	67	1.71	NS
I treat others with dignity and respect.	4.87	.34	5.00	.00	54	2.81	.01
I break our organization's projects down into manageable steps.	3.42	1.12	4.64	.50	48	6.10	.001
I make sure that people in our organization are recognized for their contributions.	3.75	1.24	4.71	.61	43	4.15	.001
I take initiative in experimenting with the way we do things in our organization.	3.49	1.18	4.21	.80	67	2.16	.05
I am upbeat and positive when talking about what our organization in doing.	4.29	.98	4.71	.47	44	2.33	.05
I support the decisions that other people in our organization make on their own.	4.15	.83	4.64	.50	67	2.15	.05
I set a personal example of what I expect from other people.	4.18	.95	4.64	.50	67	1.76	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05.

Table 15 Continued

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
I praise people for a job well done.	4.36	.95	4.71	.47	67	1.34	NS
I look for ways to improve whatever project or task I am involved in.	4.20	.70	4.71	.47	67	**2.58**	**.05**
I talk with others about how their own interests can be met by working toward a common goal.	3.87	1.02	4.57	.76	67	**2.40**	**.05**
I foster cooperative rather than competitive relationships among people I work with.	4.25	.70	4.79	.43	33	**3.59**	**.001**
I talk about the values and principles that guide my actions.	3.96	.98	4.50	.65	67	1.94	NS
I give people in our organization support and express appreciation for their contributions.	4.13	.96	4.71	.49	67	**2.21**	**.05**
I ask "What can we learn from this experience?" when things do not go as we expected.	3.84	1.05	4.43	.65	67	**2.01**	**.05**
I speak with conviction about the higher purpose and meaning of what we are doing.	3.89	.90	4.43	.51	67	**2.15**	**.05**
I give others a great deal of freedom and choice in deciding how to do their work.	4.13	.84	4.43	.76	67	1.22	NS
I follow through on the promises and commitments I make in this organization.	4.33	.67	4.71	.47	67	**2.04**	**.05**
I find ways for us to celebrate our accomplishments publicly.	3.31	1.18	4.00	.78	30	**2.62**	**.05**
I let other experiment and take risks even when outcomes are uncertain.	3.64	.87	4.14	.66	67	**2.03**	**.05**
I show my enthusiasm and excitement about what our organization is doing.	4.13	.94	4.57	.51	67	1.69	NS
I provide opportunities for other to take on leadership responsibilities.	3.84	1.07	4.57	.65	67	**2.46**	**.05**
I make sure that we set goals and make specific plans for the projects we undertake.	3.67	1.16	4.36	.63	38	**2.98**	**.05**
I make it a point to tell other about the good work done by our organization.	3.96	1.22	4.64	.50	53	**3.22**	**.01**

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05.

Table 16

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for the Five Leadership Practices

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Challenging the Process.	22.80	4.14	25.86	2.77	67	**2.61**	**.05**
Inspiring a Shared Vision.	23.40	4.84	26.71	2.92	67	**2.44**	**.05**
Enabling Others to Act.	25.07	3.28	28.00	2.60	67	**3.10**	**.01**
Modeling the Way.	23.31	4.63	27.43	2.21	67	**3.22**	**.01**
Encouraging the Heart.	23.53	5.60	27.43	2.62	45	**3.79**	**.001**

Note: SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 17

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for Challenging the Process

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Challenging the Process*	22.80	4.14	25.86	2.77	67	**2.61**	**.05**
I look for opportunities that challenge my skills and abnormalities.	4.02	.85	4.21	.70	67	.80	NS
I keep current on events and activities that might affect our organization.	3.62	.99	4.14	.77	67	1.84	NS
I take initiative in experimenting with the way we do things in our organization.	3.49	1.18	4.21	.80	67	**2.16**	**.05**
I look for ways to improve whatever project or task I am involved in.	4.20	.70	4.71	.47	67	**2.58**	**.05**
I ask "What can we learn from this experience?" when things do not go as we expected.	3.84	1.05	4.43	.65	67	**2.01**	**.05**
I let other experiment and take risks even when outcomes are uncertain.	3.64	.87	4.14	.66	67	**2.03**	**.05**

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 18

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for Inspiring a Shared Vision

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Inspiring a Shared Vision*	23.40	4.84	26.71	2.92	67	**2.44**	**.05**
I describe to others in our organization what we should be capable of accomplishing.	3.53	1.07	4.21	.70	67	**2.28**	**.05**
I look ahead and communicate about what I believe will affect us in the future.	3.69	1.05	4.21	.89	67	1.71	NS
I am upbeat and positive when talking about what our organization in doing.	4.29	.98	4.71	.47	44	**2.33**	**.05**
I talk with others about how their own interests can be met by working toward a common goal.	3.87	1.02	4.57	.76	67	**2.40**	**.05**
I speak with conviction about the higher purpose and meaning of what we are doing.	3.89	.90	4.43	.51	67	**2.15**	**.05**
I show my enthusiasm and excitement about what our organization is doing.	4.13	.94	4.57	.51	67	1.69	NS

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 19

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for Enabling Others to Act

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Enabling Others to Act*	25.07	3.28	28.00	2.60	67	**3.10**	**.01**
I include others in planning the activities and programs of our organization.	3.84	1.07	4.57	.70	67	**2.45**	**.05**
I treat others with dignity and respect.	4.87	.34	5.00	.00	54	**2.81**	**.01**
I support the decisions that other people in our organization make on their own.	4.15	.83	4.64	.50	67	**2.15**	**.05**
I foster cooperative rather than competitive relationships among people I work with.	4.25	.70	4.79	.43	33	**3.59**	**.001**
I give others a great deal of freedom and choice in deciding how to do their work.	4.13	.84	4.43	.76	67	1.22	NS
I provide opportunities for other to take on leadership responsibilities.	3.84	1.07	4.57	.65	67	**2.46**	**.05**

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 20

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for Modeling the Way

Leadership Practice	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Modeling the Way*	23.31	4.63	27.43	2.21	67	**3.22**	**.01**
I share my beliefs about how things can be run most effectively within our organization.	3.75	1.00	4.57	.65	67	**2.92**	**.01**
I break our organization's projects down into manageable steps.	3.42	1.12	4.64	.50	49	**6.10**	**.001**
I set a personal example of what I expect from other people.	4.18	.95	4.64	.50	67	1.76	NS
I talk about the values and principles that guide my actions.	3.96	.98	4.50	.65	67	1.94	NS
I follow through on the promises and commitments I make in this organization.	4.33	.67	4.71	.47	67	**2.04**	**.05**
I make sure that we set goals and make specific plans for the projects we undertake.	3.67	1.16	4.36	.63	38	**2.98**	**.05**

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 21

Means and Independent Samples T-Tests of Post-Program Responses on the SLPI for Encouraging the Heart

	Control (n = 55)		Experimental (n = 14)		df	t	P
	M	SD	M	SD			
Encouraging the Heart*	23.53	5.60	27.43	2.62	45	**3.79**	**.001**
I encourage others as they work on activities and programs in our organization.	4.02	1.11	4.64	.50	48	**3.12**	**.01**
I make sure that people in our organization are recognized for their contributions.	3.75	1.24	4.71	.61	43	**4.15**	**.001**
I praise people for a job well done.	4.36	.95	4.71	.47	67	1.34	NS
I give people in our organization support and express appreciation for their contributions.	4.13	.96	4.71	.49	67	**2.21**	**.05**
I find ways for us to celebrate our accomplishments publicly.	3.31	1.18	4.00	.78	30	**2.62**	**.05**
I make it a point to tell other about the good work done by our organization.	3.96	1.22	4.64	.50	53	**3.22**	**.01**

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. t = t-value. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Observer Student Leadership Practices Inventory

Observer rankings from a peer and a supervisor were collected on the experimental

group participants, but not the control group, post-program. Means and standard deviations

were calculated for the peer and supervisor SLPIs, and are displayed with the experimental

groupings individual post-program scores in Table 22. Matched paired t-tests were also run

between the supervisor and experimental groups and the peer and experimental groups (post-

program) and yielded no significant differences in how supervisors or peers ranked the

participant, compared to the participant's own ranking for individual questions and for the

five groupings of leadership practices (Enable others to act, Model the way, Encourage the

heart, Inspire a shared vision, and Challenge the process).

Table 22

Comparison of Observer SLPI Mean and Standard Deviation Scores with Individual Post-
Test Mean and Standard Deviation Scores

Leadership Practice	Supervisor		Peer		Experimental	
	M	SD	M	SD	M	SD
I look for opportunities that challenge my skills and abnormalities.	4.17	.47	4.21	.70	4.57	.65
I describe to others in our organization what we should be capable of accomplishing.	4.21	.80	4.21	.70	4.01	.92
I include others in planning the activities and programs of our organization.	4.50	.65	4.57	.70	4.36	.75
I share my beliefs about how things can be run most effectively within our organization.	4..36	.63	4.57	.65	4.29	.91
I encourage others as they work on activities and programs in our organization.	4.71	.47	4.64	.50	4.57	.94
I keep current on events and activities that might affect our organization.	4.57	.51	4.14	.77	4.43	.76
I look ahead and communicate about what I believe will affect us in the future.	4.43	.65	4.21	.89	4.29	.99
I treat others with dignity and respect.	4.86	.54	5.00	.00	4.93	.27
I break our organization's projects down into manageable steps.	4.64	.75	4.64	.50	4.57	.65
I make sure that people in our organization are recognized for their contributions.	4.64	.75	4.71	.61	4.43	.65

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for p < .05. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Table 22 Continued

Comparison of Observer SLPI Mean and Standard Deviation Scores with Individual Post-Test Mean and Standard Deviation Scores

Leadership Practice	Supervisor		Peer		Experimental	
	M	SD	M	SD	M	SD
I take initiative in experimenting with the way we do things in our organization.	4.50	.76	4.21	.80	4.36	.84
I am upbeat and positive when talking about what our organization in doing.	4.79	.58	4.71	.47	4.71	.61
I support the decisions that other people in our organization make on their own.	4.79	.58	4.64	.50	4.71	.47
I set a personal example of what I expect from other people.	4.71	.47	4.64	.50	4.71	.61
I praise people for a job well done.	4.86	.36	4.71	.47	4.71	.47
I look for ways to improve whatever project or task I am involved in.	4.79	.43	4.71	.47	4.64	.63
I talk with others about how their own interests can be met by working toward a common goal.	4.79	.43	4.57	.76	4.50	.76
I foster cooperative rather than competitive relationships among people I work with.	4.79	.58	4.79	.43	4.79	.58
I talk about the values and principles that guide my actions.	4.36	.75	4.50	.65	4.21	.80
I give people in our organization support and express appreciation for their contributions.	4.64	.75	4.71	.49	4.71	.61
I ask "What can we learn from this experience?" when things do not go as we expected.	4.43	.65	4.43	.65	4.00	.88
I speak with conviction about the higher purpose and meaning of what we are doing.	4.50	.65	4.43	.51	4.00	1.11
I give others a great deal of freedom and choice in deciding how to do their work.	4.50	.65	4.43	.76	4.64	.63
I follow through on the promises and commitments I make in this organization.	4.71	.47	4.71	.47	4.57	.85
I find ways for us to celebrate our accomplishments publicly.	4.50	.52	4.00	.78	4.21	.89
I let other experiment and take risks even when outcomes are uncertain.	4.29	.83	4.14	.66	4.36	.75
I show my enthusiasm and excitement about what our organization is doing.	4.79	.43	4.57	.51	4.71	.47
I provide opportunities for other to take on leadership responsibilities.	4.36	.84	4.57	.65	4.57	.65
I make sure that we set goals and make specific plans for the projects we undertake.	4.50	.65	4.36	.63	4.50	.94
I make it a point to tell other about the good work done by our organization.	4.57	.64	4.64	.50	4.57	.65
Challenge the Process*	27.29	2.84	26.36	3.37	25.86	2.77
Inspire a Shared Vision*	27.50	2.71	26.29	3.91	26.71	2.92
Enable Others to Act*	27.79	2.99	28.00	2.54	28.00	2.60
Model the Way*	27.29	2.89	26.86	4.00	27.43	2.21
Encourage the Heart*	27.93	2.79	27.21	3.42	27.43	2.62

Note: M = mean score of responses (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. NS = Not Significant for $p < .05$. * signifies M = mean score of 6 combined responses for a total ranging from 6-30 for the leadership practice (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently).

Analysis of Covariance

In addition to independent samples t-tests, an Analysis of Covariance (ANCOVA) was used to examine if there was significant change between control and experimental groups from pre-program to post-program SLPI scores. The control group scored significantly lower than the experimental group in four of the five Leadership Practices: Challenging the Process, Enabling Others to Act, Modeling the Way, and Encouraging the Heart, and are listed in Table 23. There was no statistical difference between the groups for the Leadership Practice, Inspiring a Shared Vision, also listed in Table 23.

Table 23

Analysis of Covariance for Leadership Program Participation

Leadership Practice	Control (n = 55)		Experimental (n=14)		df	F	Sig.
	M	SD	M	SD			
Challenging the Process.	22.80	4.13	25.85	2.77	1	**4.44**	**.05**
Inspiring a Shared Vision.	23.40	4.84	26.71	2.92	1	3.41	NS
Enabling Others to Act.	25.07	3.28	28.00	2.60	1	**4.86**	**.05**
Modeling the Way.	23.31	4.63	27.43	2.21	1	**8.17**	**.01**
Encouraging the Heart.	23.53	5.60	27.43	2.62	1	**4.65**	**.05**

Note: M = mean score of 6 combined responses for a total ranging from 6-30 (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. df = degrees of freedom. F = F-value, all adjusted for the baseline scores. NS = Not Significant for $p < .05$.

ANCOVA was also run to examine the difference between the pre-test scores and post-test scores of the experimental and control groups, and yielded the same findings.

Reliability

SLPI reliabilities for the Leadership Practices using Chronbach's Alpha for the combined control and experimental groups are listed in Table 24.

Table 24

Coefficient Alpha Reliability Estimates of Combined Control and Experimental Groups for the Five Leadership Practices

Leadership Practice	M (n = 69)	SD	Alpha*
Challenging the Process.	21.88	4.01	.782
Inspiring a Shared Vision.	22.86	4.36	.820
Enabling Others to Act.	21.13	2.61	.646
Modeling the Way.	23.29	4.13	.830
Encouraging the Heart.	24.19	4.81	.888

Note: M = mean score of 6 combined responses for a total ranging from 6-30 (1 = seldom or rarely, 2 = once in a while, 3 = sometimes, 4 = fairly often, 5 = very frequently). SD = standard deviation. *Coefficient alpha reliability estimates.

In addition, using Chronbach's Alpha, for the IDPA composite score of control and experimental, alpha = .807 (M = 102.84, SD = 10.93).

Correlations

Multivariate correlations were also generated using a Nonparametric Spearman's ρ, having significant positive correlations between the IDPA (pre-program) and the five leadership practices (pre-program): Challenging the Process and IDPA Spearman ρ = .483 (p < .0001), Inspiring a Shared Vision and IDPA Spearman ρ = .491 (p <.0001), Enabling Others to Act and IDPA Spearman ρ = .468 (p < .0001), Modeling the Way and IDPA Spearman ρ = .490 (p < .0001), and Encouraging the Heart and IDPA Spearman ρ = .476 (p < .0001).

Additionally, student's total involvement (demographic questionnaire questions 1-12 combined, see Appendix G) and the leadership practice Challenging the Process yielded r(67) = .265, (p< .05) and student's total involvement without honors and awards (demographic questionnaire questions 6, 7, 8, 9, 11, and 12 combined, see Appendix G) positively correlated with Challenging the Process which resulted in r(67) = .258 (p = .032).

CHAPTER V: DISCUSSION

Summary

The underlying purpose of this study was to determine if implementation of a pilot leadership and professionalism development program for the Dietetics Program at the University of Wisconsin-Stout would meet the expressed need of dietetic students by fostering growth in leadership and professionalism practices. The findings of this research suggest that through implementation of a multi-faceted program, the needs of dietetic students were met by showing significant increases in Leadership Practice Scores on the SLPI. No statistical differences were found for the total group participating in the study with respect to age, gender or completion of credits for the Leadership Practices, while the total amount of student involvement in activities appears to have a positive correlation with the Leadership Practice, Challenging the Process. In addition to leadership findings, graduate students were found to have higher scores for professionalism with the total IDPA score when compared with undergraduate students.

Demographics

The demographic findings of this study were similar to the findings of Arendt (2004): dietetic students were predominantly female (89%) and 59% of the students were found in the age category of 21 to 25 years old. Results of the study are also consistent with Kouzes and Posnser's (2002) findings: when comparing males and females, scores are generally not significantly different. In contrast, Jago and Vroom (1982) found men were less participatory in self-reported leadership styles than were women, and that women were more likely to make decisions as a group than individually. Another study conducted by Adams and Keim (2000) examining leadership practices of Greek student leaders also concluded that

gender differences do exist in self-perceptions on the SPLI: women were found to engage in Enabling Others to Act more frequently than men, and men appeared to have higher self-ratings than did women for Inspiring a Shared Vision (Adams and Keim 2000). Although the present study found no significant differences between males and females for control and experimental groups, further research of dietetic leadership with respect to gender is warranted due to the study having a small sample size, previous conflicting research for gender, and because of the profession's high female contribution.

In addition to age of participants, the total number of credits completed, and the total number of credits left to complete for control and experimental groups were not found to be statistically significant between groups. No significant differences for age, and no significant correlations between age and number of credits completed and number of credits left to complete, might be suggestive that participation in a leadership program can be beneficial for students, regardless of biological age and credit status in a dietetic program. Factors that might affect a student's total number of credits include students who have transferred from different universities into the University of Wisconsin-Stout's Dietetic Program, as well as current University of Wisconsin-Stout students who have transferred from various other degree programs. Transfer students of these types will typically have a larger number of credits than a student who has only been enrolled at the university in the Dietetics Program. In addition to the transfer students, non-traditional students (students returning to the university for a career change) and graduate students will also have a distorted number of credits due to having already completed a degree and only acknowledging the current credits needed to complete their dietetic degree they are enrolled for. Although the current study found no significant differences for participants with respect to number of credits completed

or left to complete, further research is needed to fully examine if there are differences for the leadership practices for transfer students, non-traditional students and graduate students.

Question ten, "How many honors and awards have you received to date" was the only question to have statistical significance prior to the start of the program. This question was omitted from each student's total involvement score (a total of questions six through nine, eleven and twelve) and no other differences were apparent at the start of the program, indicating that there were not differences between the groups with respect to total involvement in activities. The higher scores of the experimental group might suggest that students who chose to participate in the Leadership and Professionalism Program have received more honors and/or awards than students who did not participate in the program. Honors and awards that students received could have been awarded through student application, and recommendation or application by others (students, professors, supervisors), but is not described through use of the demographic questionnaire utilized in this study. One area that might be helpful to examine further is if many of these awards were received through self-application, which might suggest that students choosing to participate in the experimental group did so as a result of their own motivation.

One other trending score on the pre-program demographic questionnaire was for the question "How many leadership and/or professionalism training programs have you previously attended?," yielding a p-value of = .053, with M = 1.51 and M = 2.33 for control and experimental groups, respectively. Although not significant, the scores do show a trend with the experimental group's mean being higher than the control group's. As previously discussed for honors and awards, the demographic questionnaire used does not indicate whether participation in training programs was voluntary or a requirement (for a course, club

involvement, etc.). Further investigation with a larger sample size could help to determine if the trend for this question does lead to significance, and whether or not voluntary involvement in previous training programs has an influence on continued participation in leadership training programs.

Upon completion of the program, demographic scores for questions six, eight through eleven, thirteen and fourteen (see Appendix G) were found to be significantly higher for the control group when compared to the experimental group. Questions thirteen and fourteen differed significantly as expected ($p < .001$), since students in the experimental group were required to participate in the leadership and professionalism conferences and seminars, with some of these only being offered to the experimental group. The differences in the scores for questions six and eight through eleven showed that involvement in other activities for students participating in the leadership program increased. In addition, student total involvement (composite score of questions six through twelve on the demographic questionnaire) and total involvement without honors and awards (composite score of questions six through nine, eleven and twelve on the demographic questionnaire) were positively correlated with Challenging the Process. The leadership practice Challenging the Process is involved with searching out opportunities to grow and improve, as well as taking risks and experimenting to learn (Kouzes and Posner, 2006). These two findings might suggest that because of the significantly higher score on Challenging the Process, the experimental group's leadership practices in this area contributed to their increased involvement in activities as a means of leadership growth and improvement.

Professionalism

The IDPA was developed for this study, specifically for the purpose of examining

CADE's Core Competency Statements, requirements for entry-level dietitians that dietetic

education programs must meet (American Dietetic Association, 2002). Four questions had

significant differences in the pre-program IDPA and five questions had significant

differences in the post-program IDPA, with only one of these questions being significant for

both (see Table 6 and Table 7). Because the IDPA composite score of control and

experimental groups resulted in alpha = .807 (M = 102.84, SD = 10.93) using Chronbach's

Alpha, which suggests internal reliability, a total score of all questions was calculated for the

IDPA instead of using individual questions. Although there were no significant differences

found between the control and experimental groups, t-tests did yield a trend for differences

between the two groups for the total IDPA score with p = .056 (M = 106.3 and M = 111.1,

respectively) pre-program, and p = .051 (M = 107.5 and M = 118.3, respectively), post-

program.

One other significant difference was found using the IDPA. Using the Wilcoxon

Rank Sum test graduate student's total scores on the IDPA were found to be significantly

higher than undergraduates scores (p = .028). This could suggest that through a variety of

factors affecting graduate students (additional work experience, age, etc.) graduate students

have in some way advanced their professionalism skills, as defined by the CADE's Core

Competency Statements (American Dietetic Association, 2002). Multivariate correlations

also found significant positive correlations between the IDPA and the five leadership

practices groupings (pre-program) (all for p < .001), suggesting a link between Kouzes and

Posners (1987) Leadership Practices and CADE's Core Competency Statements (American

Dietetic Association, 2002). Further research is needed to develop the IDPA and determine its validity, as well as investigation of a larger sample to determine whether or not the above mentioned trend between control and experimental groups' total scores would result in significant differences between the IDPA and the five leadership practice groupings.

Leadership

Using independent samples t-tests, the pre-program SLPI found one significant difference; the Leadership Practice Enabling Others to Act found that experimental groups scores were significantly higher than the control groups. Post- program SLPI scores using the independent samples t-tests found significant differences for all five Leadership Practices: Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, and Encouraging the Heart. When using the ANCOVA, the control group scored significantly lower than the experimental group in four of the five Leadership Practices: Challenging the Process, Enabling Others to Act, Modeling the Way, and Encouraging the Heart, and are listed in Table 23. There was no statistical difference between the groups for the Leadership Practice, Inspiring a Shared Vision. These findings are comparable to the findings of other studies using the SPLI (Kouzes and Posner, 2006). According to Kouzes and Posner (2006), student leadership scores of those participating in a leadership program, when compared to a one-time project, have shown to increase in all five of the leadership practices. Additionally, several other studies have shown that participation in a leadership development program has yielded higher scores for students who have participated in a leadership development program as compared to students not participating in a program (Kouzes and Posner, 2006). Enabling Others to Act is the leadership practice most frequently reported being used, closely followed by Modeling the Way, with

Challenging the Process and Encouraging the Heart being similarly placed third. Inspiring a

Shared Vision has been noted by respondents and observers to be the least frequently

engaged leadership practice (Kouzes and Posner, 2002). Our findings are quite consistent

using ANCOVA: Modeling the Way, Enabling Others to Act, Encouraging the Heart,

Challenging the Process and Inspiring a Shared Vision. A study examining only female

Community College Presidents and using the LPI (which was the precursor to the SLPI) also

found the practices to be ordered similarly: Enabling Others to Act, Modeling the Way,

Encouraging the Heart, Challenging the Process and Inspiring a Shared Vision (Stout-

Stewart, 2005).

When comparing supervisor and peer scores of the SLPI-Observer, no statistical

differences were found for any of the five leadership practices. This is consistent with

reports by Kouzes and Posner (2002) who claim that self and observer comparisons typically

do not have statistically significant differences between the groups until the sample size

increases.

SLPI reliabilities as reported by Kouzes and Posner (1998) and Arendt (2004) and

reliability coefficients of the current study are listed in Table 25. As noted in Arendt (2004),

reliabilities in other dietetic leadership research have been considerably lower than those

reported by Kouzes and Posner (1998, pp.57), and suggest that the lower scores may be the

result of "unique leadership actions among dietetic professionals." The results of this study

are considerably higher than the fore mentioned studies, with the exception of Encouraging

the Heart. According to Kouzes and Posner (1998), the LPI is considerably strong in internal

reliability. When compared with previous leadership research and reliability in dietetics

(Arendt 2004), the reliability coefficients calculated for this study help to support the

significant findings calculated for the five Leadership Practices.

Table 25

Comparisons of Reliability Coefficients Between Three Research Studies Using the Student
Leadership Practices Inventory

	Kouzes and Posner (1998)	Arendt (2004)	Frein (2005)
Leadership Practice	Alpha	Alpha	Alpha
Challenging the Process	.66	.55	.89
Inspiring a Shared Vision	.79	.76	.83
Enabling Others to Act	.70	.62	.78
Modeling the Way	.68	.67	.82
Encouraging the Heart	.80	.73	.65

Limitations

The two main limitations of the study include sample size and sample selection. The

size of the experimental group was relatively small to conduct conclusive statistical analysis

due to attrition rates as a result of an extensive time commitment, although findings that

resulted from analysis were generally consistent with previous findings when relating to

demographic information, involvement in activities, and SLPI scores. Due to the small

sample size, gender may also have been misrepresented in this study as well.

The second important limitation to the study was sample selection: subjects were

recruited for the study initially by asking for participation (either control group or

experimental group) by all students enrolled in the Dietetic Program at the University of

Wisconsin-Stout. Due again to such a long time involvement, students were allowed to

choose their participation in either control or experimental group, which didn't allow for

random selection or placement of subjects into groups. Because subject selection and

placement was not randomized, there were many variables that may not have been controlled

including: motivational factors, GPA, type of activities involved in, previous leadership

practices development, etc.).

Other limitations to the study include the experiences students may have gained over the course of the program. A group of eight students began the program as part of the experimental group, but became part of the control group prior to the start of the leadership program. Once again, this was a very small group, and although they appeared to not be statistically different from either the control group or the experimental group, they may have characteristics that could have affected the data. Two students in the experimental group were unable to attend the MILES Leadership Conference, and were required to attend a make-up session with Mary McManus, Assistant Director of University Centers at the University of Wisconsin-Stout. These students may have received a different experience as compared to their peers who attended the MILES Leadership Conference. In addition, all of the participants in the control group may have obtained varied experiences throughout the program, including the MILES Leadership Conference, WDA poster session, individual poster presentation, individual poster development, and at the Leadership and Professionalism Seminar conducted by Mary McManus.

Additional limitations to the study include: varied experiences gained by experimental subjects while participating in the leadership conferences and seminars, administration of the Demographic Questionnaire, IDPA and SLPI at various times from October 2004 through January 2005 for pre-program assessment and over a four week period from April 2005 though May 2005 for the post-program assessment, and data gathered for the study was collected only from dietetic students at the University of Wisconsin-Stout (one dietetic program in the United States).

Conclusions

The results of this study found that leadership and professionalism practices do exist in University of Wisconsin-Stout dietetic students, based on the five leadership practices of Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way and Encouraging the Heart, which were established by Kouzes and Posner (1987). Findings of this study suggest that participation in a leadership development program, even over a short period of time, can be beneficial in improving the leadership practices. The thoughts of Garner (1993) about leadership for dietetic students and the American Dietetic Association suggests that students should be lead through advising, mentoring and modeling the way, key components of this leadership and professionalism development program. With continued leadership development through programs such as this, the American Dietetic Association, dietetic professionals and dietetic students can continue to improve their leadership and professionalism skills while helping to advance the dietetic profession in the 21st century.

Recommendations

Recommendations for continued research in dietetic leadership development include conducting research over a longer period of time and having larger experimental and control groups. Use of a larger group would aid researchers with the opportunity to more fully examine demographic characteristics of the participants, including gender, academic status and student involvement in activities. Other areas that could be further examined are development of a more reliable professionalism assessment tool and implementation of a more rigidly structured program to help identify that participation in a leadership development program does improve leadership practices of students.

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Appendix A: Student Leadership Practices Inventory (Kouzes and Posner, 1998)

STUDENT LEADERSHIP PRACTICES INVENTORY-SELF

Your Name: _____

Instructions

On the next two pages are thirty statements describing various leadership behaviors. Please read each statement carefully. Then rate *yourself* in terms of *how frequently* you engage in the behavior described. *This is not a test* (there are no right or wrong answers).

Consider each statement in the context of the student organization (for example, club, team, chapter, group, unit, hall, program, project) with which you are most involved. The rating scale provides five choices:

(1) If you RARELY or SELDOM do what is described in the statement, circle the number one (1).

(2) If you do what is described ONCE IN A WHILE, circle the number two (2).

(3) If you SOMETIMES do what is described, circle the number three (3).

(4) If you do what is described FAIRLY OFTEN, circle the number four (4).

(5) If you do what is described VERY FREQUENTLY or ALMOST ALWAYS, circle the number five (5).

Please respond to every statement.

In selecting the response, be realistic about the extent to which you *actually* engage in the behavior. Do *not* answer in terms of how you would like to see yourself or in terms of what you should be doing. Answer in terms of how you *typically* behave. The usefulness of the feedback from this inventory will depend on how honest you are with yourself about how frequently you actually engage in each of these behaviors.

For example, the first statement is "I look for opportunities that challenge my skills and abilities." If you believe you do this "once in a while," circle the number 2. If you believe you look for challenging opportunities "fairly often," circle the number 4.

When you have responded to all thirty statements, please turn to the response sheet on the back page and transfer your responses as instructed. Thank you.

STUDENT LEADERSHIP PRACTICES INVENTORY-SELF

How frequently do you typically engage in the following behaviors and actions?
Circle the number that applies to each statement.

1	2	3	4	5			
SELDOM OR RARELY	**ONCE IN A WHILE**	**SOMETIMES**	**FAIRLY OFTEN**	**VERY FREQUENTLY**			

1. I look for opportunities that challenge my skills and abilities.	1	2	3	4	5
2. I describe to others in our organization what we should be capable of accomplishing.	1	2	3	4	5
3. I include others in planning the activities and programs of our organization.	1	2	3	4	5
4. I share my beliefs about how things can be run most effectively within our organization.	1	2	3	4	5
5. I encourage others as they work on activities and programs in our organization.	1	2	3	4	5
6. I keep current on events and activities that might affect our organization.	1	2	3	4	5
7. I look ahead and communicate about what I believe will affect us in the future.	1	2	3	4	5
8. I treat others with dignity and respect.	1	2	3	4	5
9. I break our organization's projects down into manageable steps.	1	2	3	4.	5
10. I make sure that people in our organization are recognized for their contributions.	1	2	3	4	5
11. I take initiative in experimenting with the way we do things in our organization.	1	2	3	4	5
12. I am upbeat and positive when talking about what our organization is doing.	1	2	3	4	5
13. I support the decisions that other people in our organization make on their own.	1	2	3	4	5
14. I set a personal example of what I expect from other people.	1	2	3	4	5
15. I praise people for a job well done.	1	2	3	4	5

1 SELDOM OR RARELY	2 ONCE IN A WHILE	3 SOMETIMES	4 FAIRLY OFTEN		5 VERY FREQUENTLY

16. I look for ways to improve whatever project or task I am involved in.			1	2	3	4	5
17. I talk with others about how their own interests can be met by working toward a common goal.			1	2	3	4	5
18. I foster cooperative rather than competitive relationships among people I work with.			1	2	3	4	5
19. I talk about the values and principles that guide my actions.			1	2	3	4	5
20. I give people in our organization support and express appreciation for their contributions.			1	2	3	4	5
21. I ask, "What can we learn from this experience?" when things do not go as we expected.			1	2	3	4	5
22. I speak with conviction about the higher purpose and meaning of what we are doing.			1	2	3	4	5
23. I give others a great deal of freedom and choice in deciding how to do their work.			1	2	3	4	5
24. I follow through on the promises and commitments I make in this organization.			1	2	3	4	5
25. I find ways for us to celebrate our accomplishments publicly.			1	2	3	4	5
26. I let others experiment and take risks even when outcomes are uncertain.			1	2	3	4	5
27. I show my enthusiasm and excitement about what our organization is doing.			1	2	3	4	5
28. I provide opportunities for others to take on leadership responsibilities.			1	2	3	4	5
29. I make sure that we set goals and make specific plans for the projects we undertake.			1	2	3	4	5
30. I make it a point to tell others about the good work done by our organization.			1	2	3	4	5

Transferring the Scores

After you have responded to the thirty statements on the previous two pages, please transfer your responses to the blanks below. This will make it easier to record and score your responses. Notice that the numbers of the statements are listed *horizontally*. Make sure that the number you assigned to each statement is transferred to the appropriate blank. Fill in a response for every item.

1. _____	2. _____	3. _____	4. _____	5. _____
6. _____	7. _____	8. _____	9. _____	10. _____
11. _____	12. _____	13. _____	14. _____	15. _____
16. _____	17. _____	18. _____	19. _____	20. _____
21. _____	22. _____	23. _____	24. _____	25. _____
26. _____	27. _____	28. _____	29. _____	30. _____

Further Instructions

Please write your name here: _____

Please bring this form with you to the workshop (seminar or class) or return this form to:

_____

_____

_____

_____

If you are interested in feedback from other people, ask them to complete the Student LPI-Observer, which provides you with perspectives on your leadership behaviors as perceived by others.

Appendix B: CADE Core Competency Statements (American Dietetic Association, 2002)

CADE Core Competencies

1. Perform ethically in accordance with the Code of Ethics for the Profession of Dietetics
2. Refer clients/patients to other dietetics professionals or disciplines when a situation is beyond one's level or area of competence
3. Participate in professional activities
4. Perform self-assessment, prepare a portfolio for professional development, and participate in lifelong learning activities
5. Participate in legislative and public policy processes as they affect food, food security, nutrition, and health care
6. Use current technologies for information and communication activities
7. Supervise documentation of nutrition assessment and interventions
8. Provide dietetics education in supervised practice settings
9. Supervise counseling, education, and/or other interventions in health promotion/disease prevention for patients/clients needing medical nutrition therapy for
uncomplicated instances of common conditions, eg, hypertension, obesity, diabetes, and diverticular disease
10. Supervise education and training for target groups
11. Develop and review educational materials for target populations
12. Participate in the use of mass media to promote food and nutrition
13. Interpret and incorporate new scientific knowledge into practice
14. Supervise quality improvement, including systems and customer satisfaction, for dietetics service and/or practice
15. Develop and measure outcomes for food and nutrition services and practice
16. Participate in organizational change and planning and in goal-setting processes
17. Participate in business or operating plan development
18. Supervise the collection and processing of financial data
19. Perform marketing functions
20. Participate in human resources functions
21. Participate in facility management, including equipment selection and design/redesign of work units
22. Supervise the integration of financial, human, physical, and material resources and services
23. Supervise production of food that meets nutrition guidelines, cost parameters, and consumer acceptance
24. Supervise development and/or modification of recipes/formulas
25. Supervise translation of nutrition into foods/menus for target populations
26. Supervise design of menus as indicated by the patient's/client's health status
27. Participate in applied sensory evaluation of food and nutrition products
28. Supervise procurement, distribution, and service within delivery systems

29. Manage safety and sanitation issues related to food and nutrition
30. Supervise nutrition screening of individual patients/clients
31. Supervise nutrition assessment of individual patients/clients with uncomplicated instances of common medical conditions, eg, hypertension, obesity, diabetes,
diverticular disease
32. Assess nutritional status of individual patients/clients with complex medical conditions, ie, more complicated health conditions in select populations, eg, renal
disease, multi-system organ failure, trauma
33. Design and implement nutrition care plans as indicated by the patient's/client's health status
34. Manage monitoring of patients'/clients' food and/or nutrient intake
35. Select, implement, and evaluate standard enteral and parenteral nutrition regimens, ie, in a medically stable patient to meet nutritional requirements where
recommendations/adjustments involve primarily macronutrients
36. Develop and implement transitional feeding plans, ie, conversion from one form of nutrition support to another, eg, total parenteral nutrition to tube feeding to
oral diet
37. Coordinate and modify nutrition care activities among caregivers
38. Conduct nutrition care component of interdisciplinary team conferences to discuss patient/client treatment and discharge planning
39. Refer patients/clients to appropriate community services for general health and nutrition needs and to other primary care providers as appropriate
40. Supervise screening of the nutritional status of the population and/or community groups
41. Conduct assessment of the nutritional status of the population and/or community groups
42. Provide nutrition care for people of diverse cultures and religions across the lifespan, ie, infants through geriatrics
43. Conduct community-based health promotion/disease prevention programs
44. Participate in development and evaluation of a community-based food and nutrition program
45. Supervise community-based food and nutrition programs
46. Participate in coding and billing of dietetics/nutrition services to obtain reimbursement for services from public or private insurers

Competency Statements for Emphasis Areas

Nutrition Therapy Emphasis Competencies
1. Supervise nutrition assessment of individual patients/clients with complex medical conditions, ie, more complicated health conditions in select populations, eg,
renal disease, multi-system organ failure, trauma

2. Integrate pathophysiology into medical nutrition therapy recommendations

3. Supervise design through evaluation of nutrition care plan for patients/clients with complex medical conditions, ie, more complicated health conditions in select populations, eg, those with renal disease, multi-system organ failure, trauma

4. Select, monitor, and evaluate complex enteral and parenteral nutrition regimens, ie, more complicated health conditions in select populations, eg, in patients with renal disease, multi-system organ failure, trauma

5. Supervise development and implementation of transition feeding plans from the inpatient to home setting

6. Conduct counseling and education for patients/clients with complex needs, ie, more complicated health conditions in select populations, eg, those with renal disease, multi-system organ failure, trauma

7. Perform basic physical assessment

8. Participate in nasoenteric feeding tube placement and care

9. Participate in waived point-of-care testing, such as blood glucose monitoring

10. Participate in the care of patients/clients requiring adaptive feeding devices

11. Manage clinical nutrition services

Community Emphasis Competencies

1. Manage nutrition care for diverse population groups across the lifespan

2. Conduct outcome assessment/evaluation of a community-based food and nutrition program

3. Develop community-based food and nutrition programs

4. Participate in nutrition surveillance and monitoring of communities

5. Participate in community-based research

6. Participate in food and nutrition policy development and evaluation based on community needs and resources

7. Consult with organizations regarding food access for target populations

8. Develop a health promotion/disease prevention intervention project

9. Participate in waived point-of-care testing, such as hematocrit and cholesterol levels

10. Conduct general health assessment, eg, blood pressure and vital signs

Foodservice Systems Management Emphasis Competencies

1. Manage development and/or modification of recipes/formulas

2. Manage menu development for target populations

3. Manage applied sensory evaluation of food and nutrition products

4. Manage production of food that meets nutrition guidelines, cost parameters, and consumer acceptance

5. Manage procurement, distribution, and service within delivery systems

6. Manage the integration of financial, human, physical, and material resources

7. Supervise customer satisfaction systems for dietetics services and/or practice

8. Supervise marketing functions

9. Supervise human resource functions

10. Perform operations analysis

Business/Entrepreneur Emphasis Competencies

1. Perform organizational and strategic planning

2. Develop business or operating plan

3. Supervise procurement of resources

4. Manage the integration of financial, human, physical, and material resources

5. Supervise organizational change process

6. Supervise coordination of services

7. Supervise marketing functions

Appendix C: UW-Stout Institutional Board Approval of Research

Stout Solutions • Research Services
11 Harvey Hall

STOUT
UNIVERSITY OF WISCONSIN

University of Wisconsin-Stout
P.O. Box 790
Menomonie, WI 54751-0790

715/232-1126
715/232-1749 (fax)
http://www.uwstout.edu/rps/

Date: October 11, 2004

To: Jessica Frein

Cc: Carol Seaborn - Advisor

From: Sue Foxwell, Research Administrator and Human
                Protections Administrator, UW-Stout Institutional
                Review Board for the Protection of Human
                Subjects in Research (IRB)

Subject: **Protection of Human Subjects--Expedited Review**

Your project, "Measuring the Impact of Leadership and Professionalism Training on Dietetic Students," has been approved by the IRB through the expedited review process. The measures you have taken to protect human subjects are adequate to protect everyone involved, including subjects and researchers.

This project is approved through October 10, 2005. Research not completed by this date must be submitted again outlining changes, expansions, etc. Annual review and approval by the IRB is required.

Thank you for your cooperation with the IRB and best wishes with your project.

*NOTE: This is the only notice you will receive – no paper copy will be sent.

SF:dd

Appendix D: Control Group Informed Consent Form

Consent Form

I understand that participation in this study is strictly voluntary, and if I so choose, I may discontinue participation at any time without penalty or prejudice.

I understand the purpose of this study is to measure the impact of leadership and professionalism training on dietetic students at the University of Wisconsin-Stout. Some students will undergo specialized training and will receive information about the training in an attachment.

I understand that the information collected on me will be held in strict confidence, will not be a part of my permanent record, and will not be released in any way to identify me. Furthermore, by signing this form, I allow researchers to contact me in April or May of 2005 to collect final data for the conclusion of the study. I also understand that all information gathered that may identify me in any way will be destroyed upon completion of the study.

My signature verifies that I am at least 18 year of age, understand participation in all activities involved in the study, and agree to the conditions listed in this consent form.

Signature: _____ Date: _____

_ _

Please detach the bottom half of this form and retain for your records.

Questions about the rights of research subjects can be addressed to Sue Foxwell, Human Protections Administrator, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11 Harvey Hall, Menomonie, WI 54751 or by phone at (715) 232-1126. Any questions or concerns that may arise about the study may be directed to the researcher Jessica Frein, 224 ½ Main St. E Apt. 17, Menomonie, WI, 54751, by phone at (507) 273-6746, or by email at freinj@uwstout.edu, or to research advisors Dr. Carol Seaborn, RD, 225 HMEC Bldg, Menomonie, WI, 54751, by phone at (715) 232-2216, or by email at seabornc@uwstout.edu, and Mary McManus, Assistant Director-University Centers, Involvement and Leadership Center, 133 Memorial Student Center, Menomonie, WI, 54751, by phone at (715) 232-2503, or by email at mcmanusm@uwstout.edu.

Appendix E: Experimental Group Informed Consent

Consent Form

I understand that participation in this study is strictly voluntary, and if I so choose, I may discontinue participation at any time without penalty or prejudice.

I understand the purpose of this study is to measure the impact of leadership and professionalism training on dietetic students at the University of Wisconsin-Stout. Some students will undergo specialized training and will receive information about the training in an attachment.

I understand that the information collected on me will be held in strict confidencel, will not be a part of my permanent record, and will not be released in any way to identify me. I also understand that all information gathered that may identify me in any way will be destroyed upon completion of the study.

My signature verifies that I am at least 18 year of age, understand participation in all activities involved in the study, and agree to the conditions listed in this consent form.

Signature: _____ Date: _____

— —

Please detach the bottom half of this form and retain for your records.

Questions about the rights of research subjects can be addressed to Sue Foxwell, Human Protections Administrator, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11 Harvey Hall, Menomonie, WI 54751 or by phone at (715) 232-1126. Any questions or concerns that may arise about the study may be directed to the researcher Jessica Frein, 224 ½ Main St. E Apt. 17, Menomonie, WI, 54751, by phone at (507) 273-6746, or by email at freinj@uwstout.edu, or to research advisors Dr. Carol Seaborn, RD, 225 HMEC Bldg, Menomonie, WI, 54751, by phone at (715) 232-2216, or by email at seabornc@uwstout.edu, and Mary McManus, Assistant Director-University Centers, Involvement and Leadership Center, 133 Memorial Student Center, Menomonie, WI, 54751, by phone at (715) 232-2503, or by email at mcmanusm@uwstout.edu.

Appendix F: Program Informational Handout

Components of the Leadership and Professionalism Program

Assessment Tools

The leadership and professionalism assessments are inventory questionnaires based on five-point scale systems to determine frequency of activities related to individual leadership and professionalism skills, and will be administered at the start of the study and following completion of the program.

The individual leadership and professionalism development plan outlines past and present leadership activities, six-month objectives, long-range objectives and career goals. Following completion of the program, there will also be an opportunity to adjust the individual leadership and professionalism development plan.

Observer Evaluation

Two evaluations examining leadership and professionalism skills will be used. Two peers will fill out the evaluation forms. Peers include anyone who has worked closely on projects, in a group, at work or in any other organization. Peers include, but are not limited to work supervisors, coworkers, Faculty members, advisors, and students.

Leadership/Professionalism Training

The M.I.L.E.S. conference is a leadership conference offered to students at the University of Wisconsin Stout, and is aimed at improvement of leadership skills to enhance professional development.

The leadership conference is a leadership seminar designed specifically for this study, aimed at bringing students together to focus on improving leadership skills. The seminar will be lead by Mary McManus, Assistant Director of the University Centers.

The Wisconsin Dietetic Association state meeting will be held in Eau Claire in the spring of 2005 and is a meeting of dietetic professionals and students from Wisconsin. It is focused on educating attendees about nutrition-related issues, fostering professional development, and building relationships between dietetic professionals/students.

Funding for attending conferences and meetings has been obtained through the University of Wisconsin Stout Foundation. No expenses will be incurred for subjects participating in the study except for transportation and food.

Media Project

The media project involves student research on a topic and collaboration with one type of media to present this information for the public to see/hear. This project seeks to focus on improving technological development and presentation, as well as communication and public education, and will be completed in pairs.

Appendix G: Demographic Questionnaires

Demographic Information (Assessment 1)

1. How old are you? _____

2. What is your gender?   □ Male   □ Female

3. What type of student are you?   □ Graduate   □ Undergraduate

Please check the corresponding box to best answer the questions:

	0-20	21-40	41-60	61-80	81-100	101-120	120+
4. How many credits have you completed to date?	□	□	□	□	□	□	□
5. About how many credits do you have left to complete before you graduate?	□	□	□	□	□	□	□

Please check the corresponding box to best answer the questions:

	1	2	3	4	5	6	7	8	9	10+
6. How many organizations have you been involved with in your college career (clubs, professional organizations, student organizations, intramurals, committees etc.)?	□	□	□	□	□	□	□	□	□	□
7. How many work experiences have you obtained to date (paid and unpaid)?	□	□	□	□	□	□	□	□	□	□
8. How many volunteer experiences have you been involved in to date?	□	□	□	□	□	□	□	□	□	□
9. How many service projects have you taken part in to date?	□	□	□	□	□	□	□	□	□	□
10. How many honors or awards have you received to date (Academic, Athletic, Service)?	□	□	□	□	□	□	□	□	□	□
11. How many leadership and/or professionalism training programs have you previously attended?	□	□	□	□	□	□	□	□	□	□
12. How many professional organization meetings have you attended?	□	□	□	□	□	□	□	□	□	□

Demographic Information (Assessment 2)

1. How old are you? _____

2. What is your gender?   □ Male   □ Female

3. What type of student are you?   □ Graduate   □ Undergraduate

Please check the corresponding box to best answer the questions:

	0-20	21-40	41-60	61-80	81-100	101-120	120+
4. How many credits have you completed to date?	□	□	□	□	□	□	□
5. About how many credits do you have left to complete before you graduate?	□	□	□	□	□	□	□

Please check the corresponding box to best answer the questions:

	0	1	2	3	4	5	6	7	8	9+
6. How many organizations have you been involved with in your college career (clubs, professional organizations, student organizations, intramurals, committees etc.)?	□	□	□	□	□	□	□	□	□	□
7. How many work experiences have you obtained to date (paid and unpaid)?	□	□	□	□	□	□	□	□	□	□
8. How many volunteer experiences have you been involved in to date?	□	□	□	□	□	□	□	□	□	□
9. How many service projects have you taken part in to date?	□	□	□	□	□	□	□	□	□	□
10. How many honors or awards have you received to date (Academic, Athletic, Service)?	□	□	□	□	□	□	□	□	□	□
11. How many leadership and/or professionalism training programs have you previously attended?	□	□	□	□	□	□	□	□	□	□
12. How many professional organization meetings have you attended?	□	□	□	□	□	□	□	□	□	□

Please check the number attended and circle yes or no:

0	1	2	3	4	5	6	7	8	9+
□	□	□	□	□	□	□	□	□	□
□	□	□	□	□	□	□	□	□	□

13. How many leadership seminars/conferences/courses did you attend during the 2005 spring semester?

14. How many professionalism seminars/conferences/courses did you attend during the 2005 spring semester?

15. Did you attend the M.I.L.E.S. Leadership Conference during the 2005 spring semester?

    YES   NO

15. Did you attend the Wisconsin Dietetic Association's 2005 State Meeting?

    YES   NO

Appendix H: Individual Dietetics Professionalism Assessment (Frein, 2004)

Individual Dietetics Professionalism Assessment

Please describe how often you engage in the activities listed below by circling the number corresponding with each statement.

1	**2**	**3**	**4**	**5**
Rarely	Once in a while	Sometimes	Quite Often	Almost always

1. I am honest when working with others.   1 2 3 4 5 N/A

2. I am fair when working with others.   1 2 3 4 5 N/A

3. I let others explore, take risks and make decisions.   1 2 3 4 5 N/A

4. I conduct my actions with a high level of integrity and set an example of what I would expect.   1 2 3 4 5 N/A

5. I act on the basis of scientific principles and current information.   1 2 3 4 5 N/A

6. I understand differences of opinion exist, but do not subject interpretation of controversial information to personal bias.   1 2 3 4 5 N/A

7. I listen and support ideas of others and strive to foster cooperative relationships.   1 2 3 4 5 N/A

8. I assume responsibility and accountability for my personal competence in dietetics.   1 2 3 4 5 N/A

9. I continually strive to increase my knowledge and skills.   1 2 3 4 5 N/A

10. I consistently apply my knowledge and skills.   1 2 3 4 5 N/A

11. I recognize and exercise sound judgment when making
decisions.   1 2 3 4 5 N/A

12. I collaborate with others or make referrals when information
is beyond the limits of my qualifications.   1 2 3 4 5 N/A

13. I provide sufficient information to others to enable them to
make informed choices.   1 2 3 4 5 N/A

14. I respect personal information and provide full
confidentiality when obtaining information about others. 1 2 3 4 5 N/A

15. I provide nutrition information with respect to unique needs
and values of individuals.   1 2 3 4 5 N/A

16. I am consistently sensitive to any cultural differences, with
no discrimination in regards to age, disability, creed,
ethnicity, nationality, race, religion, gender or sexual
orientation.   1 2 3 4 5 N/A

17. I do not engage in any form of sexual harassment in
connection to my role as a dietetics student.   1 2 3 4 5 N/A

18. I provide objective evaluations of performance for others,
including coworkers, students, professional membership
associations, awards or scholarships, making a full,
reasonable effort to avoid any type of bias in my evaluation. 1 2 3 4 5 N/A

19. I am alert to situations that contain the potential for conflict
of interest and will provide full disclosure when one such
situation arises.   1 2 3 4 5 N/A

20. I inform public and peers through use of factual information.   1   2   3   4   5   N/A

21. I do not advertise services or products using false or
misleading information.   1   2   3   4   5   N/A

22. I accurately present my professional qualifications and
credentials.   1   2   3   4   5   N/A

23. I comply with all applicable laws and regulations concerning
the profession of dietetics.   1   2   3   4   5   N/A

24. I promote the high standards of my future role in dietetics by
accepting obligation to peers, the public and the profession
of dietetics.   1   2   3   4   5   N/A

Appendix I: American Dietetic Association Code of Ethics
(American Dietetic Association, 1999)

The American Dietetic Association and its Commission on Dietetic Registration
have adopted a voluntary, enforceable code of ethics. This code, entitled the Code of
Ethics for the Profession of Dietetics, challenges all members, registered dietitians,
and dietetic technicians, registered, to uphold ethical principles. The enforcement
process for the Code of Ethics establishes a fair system to deal with complaints
about members and credentialed practitioners from peers or the public.

The first code of ethics was adopted by the House of Delegates in October 1982;
enforcement began in 1985. The code applied to members of The American Dietetic
Association only. A second code was adopted by the House of Delegates in October
1987 and applied to all members and Commission on Dietetic Registration
credentialed practitioners. A third revision of the code was adopted by the House of
Delegates on October 18, 1998, and enforced as of June 1, 1999, for all members
and Commission on Dietetic Registration credentialed practitioners.

The Ethics Committee is responsible for reviewing, promoting, and enforcing the
Code. The Committee also educates members, credentialed practitioners, students,
and the public about the ethical principles contained in the Code. Support of the
Code of Ethics by members and credentialed practitioners is vital to guiding the
profession's actions and to strengthening its credibility.

PREAMBLE

The American Dietetic Association and its credentialing agency, the Commission on
Dietetic Registration, believe it is in the best interest of the profession and the public
it serves to have a Code of Ethics in place that provides guidance to dietetics
practitioners in their professional practice and conduct. Dietetics practitioners have
voluntarily adopted a Code of Ethics to reflect the values and ethical principles
guiding the dietetics profession and to outline commitments and obligations of the
dietetics practitioner to client, society, self, and the profession.

The Ethics Code applies in its entirety to members of The American Dietetic
Association who are Registered Dietitians (RDs) or Dietetic Technicians, Registered
(DTRs). Except for sections solely dealing with the credential, the Code applies to
all members of The American Dietetic Association who are not RDs or DTRs.
Except for aspects solely dealing with membership, the Code applies to all RDs and
DTRs who are not members of The American Dietetic Association. All of the
aforementioned are referred to in the Code as "dietetics practitioners." By accepting
membership in The American Dietetic Association and/or accepting and maintaining
Commission on Dietetic Registration credentials, members of The American
Dietetic Association and Commission on Dietetic Registration credentialed dietetics
practitioners agree to abide by the Code.

PRINCIPLES

1. The dietetics practitioner conducts himself/herself with honesty, integrity, and fairness.
2. The dietetics practitioner practices dietetics based on scientific principles and current information.
3. The dietetics practitioner presents substantiated information and interprets controversial information without personal bias, recognizing that legitimate differences of opinion exist.
4. The dietetics practitioner assumes responsibility and accountability for personal competence in practice, continually striving to increase professional knowledge and skills and to apply them in practice.
5. The dietetics practitioner recognizes and exercises professional judgment within the limits of his/her qualifications and collaborates with others, seeks counsel, or makes referrals as appropriate.
6. The dietetics practitioner provides sufficient information to enable clients and others to make their own informed decisions.
7. The dietetics practitioner protects confidential information and makes full disclosure about any limitations on his/her ability to guarantee full confidentiality.
8. The dietetics practitioner provides professional services with objectivity and with respect for the unique needs and values of individuals.
9. The dietetics practitioner provides professional services in a manner that is sensitive to cultural differences and does not discriminate against others on the basis of race, ethnicity, creed, religion, disability, sex, age, sexual orientation, or national origin.
10. The dietetics practitioner does not engage in sexual harassment in connection with professional practice.
11. The dietetics practitioner provides objective evaluations of performance for employees and coworkers, candidates for employment, students, professional association memberships, awards, or scholarships. The dietetics practitioner makes all reasonable effort to avoid bias in any kind of professional evaluation of others.
12. The dietetics practitioner is alert to situations that might cause a conflict of interest or have the appearance of a conflict. The dietetics practitioner provides full disclosure when a real or potential conflict of interest arises.
13. The dietetics practitioner who wishes to inform the public and colleagues of his/her services does so by using factual information. The dietetics practitioner does not advertise in a false or misleading manner.
14. The dietetics practitioner promotes or endorses products in a manner that is neither false nor misleading.
15. The dietetics practitioner permits the use of his/her name for the purpose of certifying that dietetics services have been rendered only if he/she has provided or supervised the provision of those services.
16. The dietetics practitioner accurately presents professional qualifications and credentials.
    a. The dietetics practitioner uses Commission on Dietetic Registration awarded credentials ("RD" or "Registered Dietitian"; "DTR" or "Dietetic Technician, Registered"; "CSP" or "Certified Specialist in Pediatric Nutrition"; "CSR" or "Certified Specialist in Renal Nutrition"; and "FADA" or "Fellow of The American Dietetic Association") only when the credential is current and authorized by the Commission on Dietetic Registration. The dietetics practitioner provides accurate information and complies with all requirements of the Commission on Dietetic Registration program in which

he/she is seeking initial or continued credentials from the Commission on Dietetic Registration.

    b. The dietetics practitioner is subject to disciplinary action for aiding another person in violating any Commission on Dietetic Registration requirements or aiding another person in representing himself/herself as Commission on Dietetic Registration credentialed when he/she is not.

17. The dietetics practitioner withdraws from professional practice under the following circumstances:

    a. The dietetics practitioner has engaged in any substance abuse that could affect his/her practice;

    b. The dietetics practitioner has been adjudged by a court to be mentally incompetent;

    c. The dietetics practitioner has an emotional or mental disability that affects his/her practice in a manner that could harm the client or others.

18. The dietetics practitioner complies with all applicable laws and regulations concerning the profession and is subject to disciplinary action under the following circumstances:

    a. The dietetics practitioner has been convicted of a crime under the laws of the United States which is a felony or a misdemeanor, an essential element of which is dishonesty, and which is related to the practice of the profession.

    b. The dietetics practitioner has been disciplined by a state, and at least one of the grounds for the discipline is the same or substantially equivalent to these principles.

    c. The dietetics practitioner has committed an act of misfeasance or malfeasance which is directly related to the practice of the profession as determined by a court of competent jurisdiction, a licensing board, or an agency of a governmental body.

The dietetics practitioner supports and promotes high standards of professional practice. The dietetics practitioner accepts the obligation to protect clients, the public, and the profession by upholding the Code of Ethics for the Profession of Dietetics and by reporting alleged violations of the Code through the defined review process of The American Dietetic Association and its credentialing agency, the Commission on Dietetic Registration.

Appendix J: Observer Student Leadership Practices Inventory (Kouzes and Posner, 1998)

STUDENT LEADERSHIP PRACTICES INVENTORY-OBSERVER

Observer

Name of Leader: _____

Instructions

On the next two pages are thirty descriptive statements about various leadership behaviors. Please read each statement carefully. Then rate *the person who asked you to complete this form* in terms of *how frequently* he or she typically engages in the described behavior. *This is not a test* (there are no right or wrong answers).

Consider each statement in the context of the student organization (for example, club, team, chapter, group, unit, hall, program, project) with which that person is most involved or with which you have had the greatest opportunity to observe him or her. The rating scale provides five choices:

(1) If this person RARELY or SELDOM does what is described in the statement, circle the number one (1).

(2) If this person does what is described ONCE IN A WHILE, circle the number two (2).

(3) If this person SOMETIMES does what is described, circle the number three (3).

(4) If this person does what is described FAIRLY OFTEN, circle the number four (4).

(5) If this person does what is described VERY FREQUENTLY or ALMOST ALWAYS, circle the number five (5).

Please respond to every statement.

In selecting the response, be realistic about the extent to which this person *actually* engages in the behavior. Do *not* answer in terms of how you would like to see this person behaving or in terms of what this person should be doing. Answer in terms of how he or she *typically behaves*. The usefulness of the feedback from this inventory will depend on how honest you are about how frequently you observe this person actually engaging in each of these behaviors.

For example, the first statement is, "He or she looks for opportunities that challenge his or her skills and abilities." If you believe this person does this "once in a while," circle the number 2. If you believe he or she looks for challenging opportunities "fairly often," circle the number 4.

When you have responded to all thirty statements, please turn to the response sheet on the back page and transfer your responses as instructed. Thank you.

STUDENT LEADERSHIP PRACTICES INVENTORY-OBSERVER

How frequently does this person typically engage in the following behaviors and actions? *Circle* the number that applies to each statement:

1	2	3	4	5
SELDOM OR RARELY	ONCE IN A WHILE	SOMETIMES	FAIRLY OFTEN	VERY FREQUENTLY

He or She:

1. looks for opportunities that challenge his or her skills and abilities.   1   2   3   4   5

2. describes to others in our organization what we should be capable of accomplishing.   1   2   3   4   5

3. includes others in planning the activities and programs of our organization.   1   2   3   4   5

4. shares his or her beliefs about how things can be run most effectively within our organization.   1   2   3   4   5

5. encourages others as they work on activities and programs in our organization.   1   2   3   4   5

6. keeps current on events and activities that might affect our organization.   1   2   3   4   5

7. looks ahead and communicates about what he or she believes will affect us in the future.   1   2   3   4   5

8. treats others with dignity and respect.   1   2   3   4   5

9. breaks our organization's projects down into manageable steps.   1   2   3   4   5

10. makes sure that people in our organization are recognized for their contributions.   1   2   3   4   5

11. takes initiative in experimenting with the way we do things in our organization.   1   2   3   4   5

12. is upbeat and positive when talking about what our organization is doing.   1   2   3   4   5

13. supports the decisions that other people in our organization make on their own.   1   2   3   4   5

14. sets a personal example of what he or she expects from other people.   1   2   3   4   5

15. praises people for a job well done.   1   2   3   4   5

1	2	3	4		5	
SELDOM OR RARELY	ONCE IN A WHILE	SOMETIMES	FAIRLY OFTEN		VERY FREQUENTLY	

He or She:

16. looks for ways to improve whatever project
or task he or she is involved in.   1   2   3   4   5

17. talks with others about how their own interests
can be met by working toward a common goal.   1   2   3   4   5

18. fosters cooperative rather than competitive
relationships among people he or she works with.   1   2   3   4   5

19. talks about the values and principles that guide
his or her actions.   1   2   3   4   5

20. gives people in our organization support and
expresses appreciation for their contributions.   1   2   3   4   5

21. asks "What can we learn from this experience?"
when things do not go as we expected.   1   2   3   4   5

22. speaks with conviction about the higher
purpose and meaning of what we are doing.   1   2   3   4   5

23. gives others a great deal of freedom and choice
in deciding how to do their work.   1   2   3   4   5

24. follows through on the promises and commitments
he or she makes in this organization.   1   2   3   4   5

25. finds ways for us to celebrate our accomplish-
ments publicly.   1   2   3   4   5

26. lets others experiment and take risks even
when outcomes are uncertain.   1   2   3   4   5

27. shows his or her enthusiasm and excitement
about what our organization is doing.   1   2   3   4   5

28. provides opportunities for others to take on
leadership responsibilities.   1   2   3   4   5

29. makes sure that we set goals and make specific
plans for the projects we undertake.   1   2   3   4   5

30. makes it a point to tell others about the good
work done by our organization.   1   2   3   4   5

Transferring the Scores

After you have responded to the thirty statements on the previous two pages, please transfer your responses to the blanks below. This will make it easier to record and score your responses. Notice that the numbers of the statements are listed *horizontally*. Make sure that the number you assigned to each statement is transferred to the appropriate blank. Fill in a response for every item.

1. _____	2. _____	3. _____	4. _____	5. _____
6. _____	7. _____	8. _____	9. _____	10. _____
11. _____	12. _____	13. _____	14. _____	15. _____
16. _____	17. _____	18. _____	19. _____	20. _____
21. _____	22. _____	23. _____	24. _____	25. _____
26. _____	27. _____	28. _____	29. _____	30. _____

Further Instructions

The above scores are for (name of person): _____

Please bring this form with you to the workshop (seminar or class) or return this form to:

_____

_____

_____

_____

Appendix K: MILES Leadership Conference (McManus, February 2005)

MILES LEADERSHIP CONFERENCE

MOTIVATING INDIVIDUAL LEADERSHIP AND EXCELLENCE at STOUT
February 19th 2005 10:00a.m. to 4:00p.m.
Memorial Student Center

HOW MUCH? $20.00 per person , BUT>>> If six people register together,
you **pay for five and the sixth registration is free!** Each participant will attend
concurrent workshops, luncheon, and also receive a MILES leather folder, pen, and a certificate of
completion for their professional portfolio. This conference is open to anyone.

Registration Deadline ~ Tuesday, February 15, 2005IIIII
at the Involvement & Leadership Center, lower level, Memorial Student Center (Checks should be made
payable to UW-Stout. Credit cards and Department Requisitions also accepted. For more information,
please call us at 232-1772, or visit us.

Professional concurrent workshops offered by alumni, staff, and regional business persons

- "Non-Management Leadership" presented by Mike Mayer, Vice President for Business Development, Nation's CareLink
- "Design-ed Fresh Daily" presented by Gregory Rohm of KPA Design
- "Leadership?" presented by Karl Faeke, Vice President of Operations for Link Snacks, Inc.
- "Connecting Learning and Service With Your Career", presented by Mike Walz, student teacher, Altoona Public School System
- "Talk to the Hand – Inter Group Dialogue Experiences Create Assets to Your Professionalism" presented by Anderson Perryman, Jackie Berry and Mary McManus of UW-Stout
- Panel of recent Stout graduates speaking on "Life after College"

Luncheon accompanying a motivational keynote presentation by Michelle Neujahr
With over a decade of experience as an entrepreneur and motivational
speaker, she is an expert in increasing workplace morale, personal
development and change management. Michelle will inspire you
to take responsibility for your own success while having fun.
Michelle's keynotes are dynamic, funny, and challenging. You will
leave forever changed.

2005 MILES Committee: Carly Hach, Dan Abbott, Renae Best, Tana
Lamm, Scott Erickson, Mary McManus
The planning committee members for the "MILES" Conference are
dedicated to enhancing leadership skills, offering network
opportunities, and providing an inside look at life after college to the UW-Stout campus.

Appendix L: Dietetics Leadership and Professionalism Development Workshop
(McManus, March 2005; Astin and Astin, 1996; Boras, 1995; Cavenaugh, 1984; Chaleff,
1995; Kimberly-Clark Corporation, 1993; Redding, 1985; Shriberg, 1993)

Dietetics Leadership and Professional Development Workshop

March 4, 2005　　　　12:45pm-5:00pm　　　　dress: casual
Location: Northwoods room, Memorial Student Center, UW-Stout

12:30　students begin to arrive, sign-in

12:45　**Welcome**
　　　　　　　Review the agenda, projects and tasks for the afternoon

1:00　**Introduction** of first segment of the day, review of session materials, choice of
　　　　interview project focus

1:30　**Practicing Public Promotion**
　　　　　WEAU-TV13 Reporter and Producer Salina Heller will work with you on
　　　　becoming more comfortable in public presentations offered by dieticians. Live-
　　　　segments on "News at Noon" or "Live at 5" television can make some people
　　　　nervous. This will be a time for you to learn and begin to practice a new set of
　　　　professional skills. Salina will share some tips on effective presentation of
　　　　information within tight time limitations. You will have opportunity to practice in
　　　　dyads and triads, and then to be videotaped for a practice segment. You will also
　　　　receive some feedback on your practice presentation – useful as you develop a
　　　　portfolio of professional activity.

2:30　**Break** – assorted healthy snacks and beverages will be provided

2:45　**Dietetics and the Process of Leading Social Change**
This segment will be guided by Mary McManus, Assistant Director of University
Centers. The segment include preliminary content review of the Leadership Practices
Inventory and the Social Change Model of Leadership Development, Time will also be
spent in exploration of your personal and professional values (in relation to the ADA
expectations for ethical practice).

4:50　**Evaluation,** explanation of upcoming grant activities, closure

*Personal Statement:*_____

My mission is to lead a life centered around the values of:

And to develop the characteristics of:

And to use (develop) my skills and talents of:

To (accomplish what?):

The Practices of Exemplary Leadership
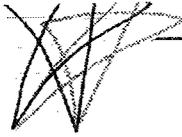
Leadership is an observable, learnable set of practices. Leadership is not something mystical and ethereal that cannot be understood by ordinary people. Given the opportunity for feedback and practice, those with the desire and persistence to lead can substantially improve their abilities to do so.*

Challenging the Process

Challenge is the opportunity for greatness. People do their best when there's the chance to change the way things are. Maintaining the status quo breeds mediocrity. Leaders seek and accept challenging opportunities to test their abilities. They motivate others to exceed their limits. They look for innovative ways to improve the organization. Leaders do their best when there is a tough assignment or quest for change.

Most innovations do not come from leaders. They come from customers and people who do the work. Leaders listen to advice and counsel from others. They know that good ideas enter the mind through the ears, not the mouth.

Leaders experiment and take risks. Since risk taking involves mistakes and failure, leaders learn to accept the inevitable disappointments. They treat them as learning opportunities. **Leaders:**

> ❑ **Search for Opportunities**
> ❑ **Experiment and Take Risks**

Inspiring a Shared Vision

There is no freeway to the future. No paved highway from here to tomorrow. There is only wilderness. Only uncertain terrain. There are no roadmaps. No signposts. So pioneering

leaders rely upon a compass and a dream.

Leaders look forward to the future. They hold in their minds visions and ideals of what can be. They have a sense of what is uniquely possible if all work together for a common purpose. They are positive about the future, and they passionately believe that people can make a difference.

But visions seen only by the leaders are insufficient to create organized movement. They must get others to see the exciting future possibilities. Leaders breathe life into visions. They communicate their hopes and dreams so that others clearly understand and accept them as their own. They show others how their values and interests will be served by the long term vision of the future. Leaders are expressive, and they attract followers through warmth and friendship. With strong appeals and quiet persuasion, they develop enthusiastic supporters. **Leaders:**

> ❑ **Envision the Future**
> ❑ **Enlist the Support of Others**

Enabling Others to Act

Leaders know that they cannot do it alone. It takes partners to get extraordinary things done in organizations.

Leaders build teams with spirit and cohesion, teams that feel like family. They actively

involve others in planning and give them discretion to make their own decisions. Leaders make others feel like owners, not hired hands.

Leaders develop collaborative goals and cooperative relationships with colleagues. They are considerate of the needs and interests of others. They know that these relationships are the keys that unlock support for their projects. They make sure that when they win, everyone wins.

Mutual respect is what sustains extraordinary group efforts. Leaders create an atmosphere of trust and human dignity. They nurture self-esteem in others. They make others feel strong and capable. **Leaders:**

❑ **Foster Collaboration**
❑ **Strengthen Others**

Modeling the Way

A leader needs a philosophy, a set of high standards by which the organization is measured, a set of values about how employees, colleagues, and customers ought to be treated, a set of principles that make the organization unique and distinctive.

Leaders also need plans. They need maps to help guide people. Yet complex plans overwhelm people; they stifle action. Instead, leaders lay down milestones and put up signposts. They unravel bureaucratic knots. They create opportunities for small wins, which add up to major victories.

Words and plans are not enough. Leaders stand up for their beliefs. They practice what they preach. They show others by their own example that they live by the values they profess. Leaders know that while their position gives them authority, their behavior earns

them respect. It is consistency between words and actions that build a leader's credibility. **Leaders:**

❑ **Set an Example**
❑ **Plan Small Wins**

Encouraging the Heart

Getting extraordinary things done in organizations is hard work. The climb to the summit is arduous and steep. Leaders encourage others to continue the quest. They inspire others with courage and hope.

Leaders give heart by visibly recognizing people's contributions to the common vision. With a thank-you note, a smile, an award, and public praise, the leader lets others know how much they mean to the organization.

Leaders express pride in accomplishments of their teams. They make a point of telling the rest of the organization about what the teams have achieved. They make people feel like heroes.

Hard work can also be fun work. Hoopla is important to a winning team. Everybody loves a parade. Leaders find ways to celebrate accomplishments. They take time out to toast a milestone with champagne.

And what sustains the leader? From what source comes the leader's courage? The answer is love.

Leaders are in love — in love with the people who do the work, with what their organizations produce, and with their customers. **Leaders:**

❑ **Recognize Contributions**
❑ **Celebrate Accomplishments**

☆☆☆☆☆

Suggestions for Exemplary Leadership

Challenging the Process

Start experimenting with new ways of doing things. Search for opportunities to do the job more efficiently or effectively. Take small risks at first and learn from your mistakes.

Inspiring a Shared Vision

Take time to envision the future. Do not restrict your imagination; you can sort out the possible from the impossible later, as you select out the positive dreams. When you have your vision clearly in mind, communicate it enthusiastically to those whose help you need to enlist.

Enabling Others to Act

Since it is highly unlikely that you will accomplish anything significant without the help of others, try to treat others with respect. Listen to their ideas and encourage them to feel that they are a vital part of the project. Whenever feasible, allow them to make the decisions. Try to foster collaboration both with members of your work team and other colleagues.

Modeling the Way

Take time to clarify in your own mind your philosophy of the organization. Make sure you know what your values are, and come to an agreement with your work team about the way customers and colleagues and other employees should be treated. Continually test your actions against these standards. Also set small, realistic goals so that you can celebrate accomplishments all along the way.

Encouraging the Heart

When anyone on your team makes a worthwhile contribution, acknowledge it. This is sometimes best done in private with a word or a note of appreciation. In other instances, however, public praise can be a real encouragement to the person who receives the praise and a motivation to those who hear the praise. Also find ways to celebrate goals that are reached. Without being offensive, relate your team's accomplishments to others in the organization.
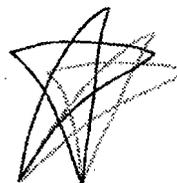
KOUZES POSNER INTERNATIONAL
15419 Banyan Lane
Monte Sereno, California 95030
(408) 354-9170

Nine markers that can point the way on your path to personal purpose: Juana Boras in **Reflections on Leadership**. L. Spears, Indianapolis, RKGCSL, 1995 p 179-193.

1. Call your purpose- listen for guidance (be a good listener, ask trusted family and friends what they think of you- really.)

2. Find a sacred place of natural beauty (the forest, a lake, your own quiet place where you can think, undisturbed).

3. See time as continuous- begin with the child and move forward
   What is your Family composition?
   Look at gender significance - how would you be treated if you were of the opposite gender?
   What is your geographic influence?
   What is your Cultural background?
   What are your generational influences? (what do you know about your grandparents? Ancestors?)

4. Identify special skills and talents; accept imperfections
   Create a Life timeline- major activity and jobs- take honest inventory of you.
   Are you best with people-related activities? With technical/mechanical things?
   With intellectual or artistic pursuits?
   Take note of things that come easy to you - that you enjoyed or excelled in-what further training do you need - accept your own doubts and limitations- mistakes are also powerful learning opportunities.

5. Trust your intuition

6. Open the door when opportunity knocks - learn how to take risks. Make a list of the risks you have taken in the recent past...what are the risks you would like to take in the near future? What is stopping you?

7. Find your passion and make it happen- what would you do w/your life if money and recognition were not motivators? If you won the lottery? If you had only 6 months to live? If you would have good health to age 110? What do you dream about doing? What is in your heart?

8. Write your life story; imagine a great leader, dream a little, let it be you.

9. Honor your legacy- one step at a time - what would people say about you at your funeral? How do you want your heirs to remember you?

Use this *Path to Personal Purpose* as a journaling project, or in the process of deciding which job offer to accept, or as a way to encourage and stimulate conversation with people who are close to you and in whom you trust. Good luck, and good dreams to you!

Televised Interviews….. "OOOOOHHH, They're SOOOO Gooood!!!!"

Part of your professional life in Dietetics will quite possibly include developing and delivering public presentations. You might be attending PTA or ROTARY Club to explain the dangers of the latest diet fads, or you might be invited to do a three minute interview segment on "News and Noon" and "Live at Five".

Regardless of the nature of the public presentation, it is common to get the jitters, flutters, and/or giggles in these types of settings. This part of today's activity is designed to assist you in developing a comfort level when having to speak (on your feet or on your seat)… about the topics that provide you with passion in your profession.

In self-selected groups of three, pick one of the recipes below. As a group, you will use ingredients from the PROP TABLE, and develop a three-minute presentation about the (health or lack there of…) of this recipe and these products. Be able to present alternatives to the recipe that might be healthier to the end user. You will have 30 minutes to work in your small group to develop and practice this presentation.

Salina Heller, Producer and Reporter from WEAU-TV 13 in Eau Claire, Wisconsin, will coach you in the "news at noon" presentation process.

Your interview will be videotaped. After spring break, you will receive a CD-R of your presentation. You may use this material for future reference, as a personal coaching tool, and/or as an artifact for your portfolio.

Good Luck!!!!

Recipes

1. Easy Blueberry Bombe

Ingredient props – cake mix, muffin mix, blue berry pie filling, nuts....

Other ingredients – ice cream, whipping cream, sugar

Bake cake mix in BOMBE pan as directed on box.
Bake muffin mix in a square pan....

When cake and muffin mix are done, crumble muffin mix mixed w/blueberry pie filling into bombe pan (cake). Layer in with Ice Cream and Nuts. Freeze until solid.

Remove bombe from freezer – remove gently from pan – "frost" with really heavy sweetened whipping cream. ☺ ☺

2. Side Dishes du Jour
   a. Can of chile w/beans and mustard
   b. Artichoke hearts w/couscous, capers, mayo and mustard
   c. Chinese veggie dish laced with crab meat

3. Make up your own idea
Use items on the table, or not... be creative!!!

Hierarchy of Bad Managerial Decisions

The Clearly Illegal

The Clearly Immoral or Unethical

The Psychopathic or Insane

The Incredibly Stupid

The Inefficient or Impractical

The Irritating or Annoying

Adapted from:
Rocking Boats, Blowing Whistles, and Teaching Speech Communication
by W. Charles Redding, 1985

Ethical Models for Business Decisions

Definition and Origin	Strengths	Weaknesses	When Used
Utilitarianism			
"The greatest good for the greatest number": Bentham (1748-1832), Adam Smith (1723-1790), David Ricardo (1772-1823)	1. Concepts, terminology, methods are easiest for businesspersons to work with; justifies a profit maximization system. 2. Promotes view of entire system of exchange beyond "this firm." 3. Encourages entrepreneurship, innovation, productivity.	1. Impossible to measure or quantify all important elements. 2. "Greatest good" can degenerate into self-interest. 3. Can result in abridging person's rights. 4. Can result in neglecting less powerful segments of society.	1. Use in all business decisions and will dominant criteria in 90%. 2. Version of model is implicitly used already, although scope is generally limited to "this firm."
Theory of Justice			
Equitable distribution of society's benefits and burdens: Aristotle (384-322 B.C.), Rawls (1921-)	1. The "democratic" principle. 2. Does not allow a society to become status- or class-dominated. 3. Ensures that minorities, poor, handicapped receive opportunities and a fair share of output.	1. Can result in less risk, incentive, and innovation. 2. Encourages sense of "entitlement."	1. In product decisions usefulness to all in society. 2. In setting salaries for unskilled workers, executives. 3. In public policy decisions: to maintain a floor of living standards for all. 4. Use with, for example, performance appraisal, due process, distribution of rewards and punishments.
Theory of Rights			
Individual's freedom is not to be violated: Locke (1635-1701) —property; Kant (1724-1804) —personal rights	1. Ensures respect for individual's property and personal freedom. 2. Parallels political "Bill of Rights."	1. Can encourage individualistic, selfish behavior.	1. Where individual's property or personal rights are in question. 2. Use with, for example, employee privacy, job tenure, work dangerous to person's health.

Source: Gerald F. Cavanagh, S.J., *American Business Values*, (Prentice-Hall, 1984) Chapter 5, "Ethics in Business".

ETHICAL GUIDELINES

To be Ethical, we will:

—respect people's autonomy

—avoid doing harm

—try to benefit other people

—be just

—be faithful

To be Ethical, we will:

—practice compassion and tolerance

—be true to relationships and care for others

—respond to needs and be sensitive to those who are affected

To make Ethical decisions, we will:

—take time to analyze our ethical dilemmas

—consider all options

—use others as a sounding board

—make decisions that can be implemented
  and that we can live with

To behave Ethically, we will:

—be consistent with our purpose

—do what makes us proud

—be patient

—be persistent

—maintain our perspective

What is right for you?

List some of the principles by which you try to live your life.....

1. How do you wish to be viewed by others, both personally and professionally?

2. How do you want to be treated in business and in your personal life?

McManus

The Courageous Follower...
According to Chaleff, being a follower is all about being a courageous person. Courage is demonstrated in five dimensions (Pp6-7). Give examples from your field of study or business for each of these dimensions of courage.

Courage to Assume Responsibility

Courage to Serve

Courage to Challenge

Courage to Participate in Transformation

Courage to Leave

Source: Chaleff, Ira. The Courageous Follower. Berrett-Koehler Publishers, Inc., San Francisco, 1995.

INTEGRITY

*definition: Maintaining ethical and
organizational norms*

Sample Behaviors

- Maintains confidentiality of sensitive business information

- Acts in a manner consistent with stated intent

- Acts in accordance with the rules or guidelines of the organization

- Models behavior in line with formal and informal codes of acceptability both inside and outside of work

Theory of Moral Development (Lawrence Kohlberg)

Preconventional Stage - you follow rules to avoid punishment. You act in your own self-interest. You would drive as fast as you can without getting caught, make the best deal for yourself, and sell the faulty garage sale item, since all sales are final.

Conventional Stage - You believe in behaving the way your peers do. You would drive like your peers drive, deal the way your peers deal, and sell faulty items if your peers do.

Principled Stage - You are aware that different people have different values. You always try to do what you believe to be just and fair, regardless of what others do. You would probably drive close to the speed limit, you wouldn't take advantage of another person, and you wouldn't knowingly sell a faulty product.

Approaches

Individualist Approach - You choose whatever is best for your own long-term interest.

Utilitarian Approach - You believe that moral behavior is that which produces the greatest good for the greatest number of people. You make decisions based on the impact they will have on all parties.

Moral Rights Approach - You believe that human beings have fundamental rights that should never be taken away. To you, the ethically correct decision is the one that defends due process, free speech, privacy, safety, and free consent.

Justice Approach - You think that decisions must be based on equality, fairness, and impartiality. You believe in using rule of law guidelines for distributive, procedural and compensatory justice.

Shriberg, Art *Student Leader* "How do you make ethical decisions?" v 3 # 2, Magna Publications, Madison, March, 1993

McManus, ethics

Other challenges... What stage are you in? What approach would you use?
How do you wish to be viewed by others, both personally and professionally?
What will you stand for?

1. You are in either ...
a. a responsible corporate position
b. a responsible managerial position
c. a responsible front-line, entry level position
d. a responsible member of the local Board of Directors

You discover a policy that is socially injurious.

The policy involves (choose one):
        a. detailed instances of environmental contamination
        b. corporate espionage/theft of proprietary information
        c. embezzlement/fraud
        d. mistreatment of a client by a trusted staff member

2. Why is it so difficult to run for public office?
Describe the ideal candidate's ethical values and practices.
Do you know anyone who fits this description?
Would you ever consider running for office (why, why not)?

The Seven C's of Leadership for Social Change

This model represents **nonhierarchical** leadership. Decisions are made collectively; there is a division of labor based on individuals' talents and expertise; and everyone assumes responsibility for the success of the project. In this model, there should be a great deal of introspection, individual and group reflection.

Consciousness of Self includes exploration of personal/professionals values and behaviors. Honesty (being open; integrity; **Congruence**)

Commitment (willingness to become involved; to invest the time and energy needed to see a project through)

Identification of the **Common Purpose** you share with others will lead to more effective **Collaboration.** In this context, collaboration includes Empathy (listening nonjudgementally, understanding) and Inclusivity. By respecting differing viewpoints, valuing diverse talents, giving and receiving feedback, trusting (or having faith) in others, you approach problem-solving and controversy with **Civility.**

The model extends, then, to **Citizenship** and Service (caring, serving, becoming involved in the community; being socially responsible). How do you contribute to the well-being of your community?

Astin, Alexander W and Helen S. A Social Change Model of Leadership Development. HERI/UCLA, Los Angeles, 1996.

CODE OF ETHICS
FOR THE
PROFESSION OF DIETETICS

Ethics Case Scenarios – Discussion Questions

1. Is the scenario an "ethics" issue?
2. If it is an ethics issue, what can you find in the 19 principles that may be helpful?
3. Based on the Code, what are your options for action?
4. What resources are available to support your actions?

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1. **Conflict of Interest:** The president-elect of a state dietetic association is employed by a nationwide supplemented, fast-weight-loss program. Today the state association board is voting on a position regarding very-low-calorie diets.

2. **Confidentiality:** A dietitian gets on the elevator with you and several other people; she has just begun screening a client with an unusual diagnosis, and begins to discuss the client's case with you. Yes –

3. **Principles Relating to Dietetics Practice:** At 4 pm on Friday you receive a phone call from the administration department secretary, who tells you, the director of nutrition services, that she has received a call from a retired company executive who would like a copy of a renal diet.

4. **Use of Credentials:** An individual in private practice plans to take the registration examination. In anticipation of a favorable outcome and to save time in promoting his practice, he has business cards printed with "RD" after his name and also uses advertisements promoting his RD credential. Several months later he takes the exam and receives notification that he has passed.

5. **Disagreement with Employer's Practice:** You are an employee of a large medical group. One of the physician partners prescribes megavitamin therapy for AIDS patients and severely restricted diets for patients with cancer. He asks you to counsel his patients in these two regimens. Yes

6. **The Price of Personal Ethics:** You serve on the nutrition committee of a national voluntary health organization. This organization has recently undertaken a controversial nutrition program (promotion of high fat, high protein, and low carbohydrate diet). On Monday morning you receive a call from the committee asking you to write to legislators indicating your support for the program.

7. **Stealing Exam Questions:** While taking a course to prepare yourself for the registration examination, you are asked to memorize two test items and write them down immediately after leaving the exam room, then submit them for compilation of a practice exam.

8. **Disagreement with an MD Regarding Patients Needs:** A patient is admitted with severe trauma. Upon screening and subsequent nutrition assessment, you determine he is at risk of becoming malnourished and recommend nutrition support. Five days later the patient is still NPO and receiving D5-W through a peripheral venous access. You call his physician, who refuses to initiate nutrition support and states that the patient has enough fat to meet his needs for a long time.

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Ethics Scenarios and Possible Resolutions

Conflict of Interest: If the individual did not declare a conflict of interest and did vote on this issue, the ADA/CDR Code of Ethics principal 12 could be in question. The president-elect should declare a "conflict of interest" and not participate in the discussion or vote regarding this topic.

Confidentiality: The ADA/CDR Code of Ethics principals 1 and 7 are in question. Practitioners must conduct themselves with integrity. They are not to discuss information related to clients/cases in a public place. Discussions with appropriate colleagues regarding clients/cases should take place only in a confined, professional environment.

Principles Relating to Dietetics Practice: The dietetics practitioner should return the call to the individual to discuss the situation. The practitioner should recommend that the individual seek the nutrition services of a renal nutrition specialist to determine the appropriate care/course of action. This is not an ethics violation. However, if the practitioner provides incomplete information or does not have the expertise to address the individual's nutritional needs, the ADA/CDR Code of Ethics principal 5 could be in question.

Use of Credentials: If the individual uses the business cards and represents himself as an RD prior to notification of the exam results, this becomes a legal issue and the practitioner must be sent a "Cease and Desist" letter from the Commission on Dietetic Registration. If the individual is not a member of ADA, and is not yet credentialed by CDR, he is not bound by the ADA/CDR Code of Ethics. If the individual is a member, then he is in conflict with the ADA/CDR Code of Ethics and first is sent a "Cease and Desist" letter. The ADA/CDR Code of Ethics principals 1, 16a, & 19 are in question. The dietetics practitioner has not conducted himself with honesty and is not accurately representing himself with professional qualifications and credentials. ADA members & non-members who are registered are obligated to report individuals who may be promoting themselves inaccurately.

Disagreement with Employer's Practice: The ADA/CDR Code of Ethics principals 2,3 and 5 may be in question if the practitioner advised the client to follow the megavitamin or restricted diet. According to the Code, dietetics practitioners must practice based upon scientific principals and current information, must present substantiated information, and recognize and exercise professional judgment within the limits of their qualifications. If these therapies are not medically/ scientifically proven, the dietitian needs to document reasons and rationale clarifying why the diet cannot be provided. The dietitian must also work with his or her supervisor to resolve this professional disagreement with the physician regarding medical treatment. Using the established processes within the institution to handle and document professional differences of opinion is advised.

The Price of Personal Ethics: ADA/CDR Code of Ethics principal 1 is in question. Dietetics practitioners are to conduct themselves with honesty, integrity, and fairness. It would be dishonest to support an issue that you do not believe in. However, sending the letter and continuing to participate on the committee would be a strictly personal decision.

Stealing Exam Questions: The ADA/CDR Code of Ethics principals 1, 16b, and 19 are in question. There are two issues to consider. The person who asked students to write down the questions and answers is violating Code principal 16b because they are asking a person to violate a CDR requirement, and they are not supporting or promoting high standards of professional practice. The second violation would occur if the student were a member and actually wrote down the questions and answers. Code principals 1 and 19 promoting honesty and integrity would be violated. If the student did not write down the questions and answers there would be no violation, however they are obligated to report this situation to CDR based on principle 19.

Disagreement with an MD Regarding Patients Needs: The ADA/CDR Code of Ethics principals 2, 3, 5 and 6 are in question. The dietetics practitioner must practice based upon scientific principals, present substantiated information and interpret controversial information without personal bias, recognize and exercise professional judgment and collaborate with others, seek counsel, or make referrals as appropriate, and provide sufficient information to enable clients/others to make their own informed decisions. The dietetics practitioner must try to educate the physician, work through his or her supervisors to resolve the disagreement and document the information. Using established processes within the institution to handle and document professional differences of opinion is advised.

The ADA/CDR Code of Ethics – Trainer's Guide   **HANDOUT - D**

ADA Code of Ethics:

> The American Dietetic Association and its Commission on Dietetic Registration have adopted a voluntary, enforceable code of ethics. This code, entitled the Code of Ethics for the Profession of Dietetics, challenges all members, registered dietitians, and dietetic technicians, registered, to uphold ethical principles. The enforcement process for the Code of Ethics establishes a fair system to deal with complaints about members and credentialed practitioners from peers or the public.

> The first code of ethics was adopted by the House of Delegates in October 1982; enforcement began in 1985. The code applied to members of The American Dietetic Association only. A second code was adopted by the House of Delegates in October 1987 and applied to all members and Commission on Dietetic Registration credentialed practitioners. A third revision of the code was adopted by the House of Delegates on October 18, 1998, and enforced as of June 1, 1999, for all members and Commission on Dietetic Registration credentialed practitioners.

> The Ethics Committee is responsible for reviewing, promoting, and enforcing the Code. The Committee also educates members, credentialed practitioners, students, and the public about the ethical principles contained in the Code. Support of the Code of Ethics by members and credentialed practitioners is vital to guiding the profession's actions and to strengthening its credibility.

> **PREAMBLE**

> The American Dietetic Association and its credentialing agency, the Commission on Dietetic Registration, believe it is in the best interest of the profession and the public it serves to have a Code of Ethics in place that provides guidance to dietetics practitioners in their professional practice and conduct. Dietetics practitioners have voluntarily adopted a Code of Ethics to reflect the values and ethical principles guiding the dietetics profession and to outline commitments and obligations of the dietetics practitioner to client, society, self, and the profession.

> The Ethics Code applies in its entirety to members of The American Dietetic Association who are Registered Dietitians (RDs) or Dietetic Technicians, Registered (DTRs). Except for sections solely dealing with the credential, the Code applies to all members of The American Dietetic Association who are not RDs or DTRs. Except for aspects solely dealing with membership, the Code applies to all RDs and DTRs who are not members of The American Dietetic Association. All of the aforementioned are referred to in the Code as "dietetics practitioners." By accepting membership in The American Dietetic Association and/or accepting and maintaining Commission on Dietetic Registration credentials, members of The American Dietetic Association and Commission on Dietetic Registration credentialed dietetics practitioners agree to abide by the Code.

PRINCIPLES

19. The dietetics practitioner conducts himself/herself with honesty, integrity, and fairness.
20. The dietetics practitioner practices dietetics based on scientific principles and current information.
21. The dietetics practitioner presents substantiated information and interprets controversial information without personal bias, recognizing that legitimate differences of opinion exist.
22. The dietetics practitioner assumes responsibility and accountability for personal competence in practice, continually striving to increase professional knowledge and skills and to apply them in practice.
23. The dietetics practitioner recognizes and exercises professional judgment within the limits of his/her qualifications and collaborates with others, seeks counsel, or makes referrals as appropriate.
24. The dietetics practitioner provides sufficient information to enable clients and others to make their own informed decisions.
25. The dietetics practitioner protects confidential information and makes full disclosure about any limitations on his/her ability to guarantee full confidentiality.
26. The dietetics practitioner provides professional services with objectivity and with respect for the unique needs and values of individuals.
27. The dietetics practitioner provides professional services in a manner that is sensitive to cultural differences and does not discriminate against others on the basis of race, ethnicity, creed, religion, disability, sex, age, sexual orientation, or national origin.
28. The dietetics practitioner does not engage in sexual harassment in connection with professional practice.
29. The dietetics practitioner provides objective evaluations of performance for employees and coworkers, candidates for employment, students, professional association memberships, awards, or scholarships. The dietetics practitioner makes all reasonable effort to avoid bias in any kind of professional evaluation of others.
30. The dietetics practitioner is alert to situations that might cause a conflict of interest or have the appearance of a conflict. The dietetics practitioner provides full disclosure when a real or potential conflict of interest arises.
31. The dietetics practitioner who wishes to inform the public and colleagues of his/her services does so by using factual information. The dietetics practitioner does not advertise in a false or misleading manner.
32. The dietetics practitioner promotes or endorses products in a manner that is neither false nor misleading.
33. The dietetics practitioner permits the use of his/her name for the purpose of certifying that dietetics services have been rendered only if he/she has provided or supervised the provision of those services.
34. The dietetics practitioner accurately presents professional qualifications and credentials.
    a. The dietetics practitioner uses Commission on Dietetic Registration awarded credentials ("RD" or "Registered Dietitian"; "DTR" or "Dietetic Technician, Registered"; "CSP" or "Certified Specialist in Pediatric Nutrition"; "CSR" or "Certified Specialist in Renal Nutrition"; and "FADA" or "Fellow of The American Dietetic Association") only when the credential is current and authorized by the Commission on Dietetic Registration. The dietetics practitioner provides accurate information and complies with all requirements of the Commission on Dietetic Registration program in which

he/she is seeking initial or continued credentials from the Commission on Dietetic Registration.

b. The dietetics practitioner is subject to disciplinary action for aiding another person in violating any Commission on Dietetic Registration requirements or aiding another person in representing himself/herself as Commission on Dietetic Registration credentialed when he/she is not.

35. The dietetics practitioner withdraws from professional practice under the following circumstances:

   a. The dietetics practitioner has engaged in any substance abuse that could affect his/her practice;

   b. The dietetics practitioner has been adjudged by a court to be mentally incompetent;

   c. The dietetics practitioner has an emotional or mental disability that affects his/her practice in a manner that could harm the client or others.

36. The dietetics practitioner complies with all applicable laws and regulations concerning the profession and is subject to disciplinary action under the following circumstances:

   a. The dietetics practitioner has been convicted of a crime under the laws of the United States which is a felony or a misdemeanor, an essential element of which is dishonesty, and which is related to the practice of the profession.

   b. The dietetics practitioner has been disciplined by a state, and at least one of the grounds for the discipline is the same or substantially equivalent to these principles.

   c. The dietetics practitioner has committed an act of misfeasance or malfeasance which is directly related to the practice of the profession as determined by a court of competent jurisdiction, a licensing board, or an agency of a governmental body.

37. The dietetics practitioner supports and promotes high standards of professional practice. The dietetics practitioner accepts the obligation to protect clients, the public, and the profession by upholding the Code of Ethics for the Profession of Dietetics and by reporting alleged violations of the Code through the defined review process of The American Dietetic Association and its credentialing agency, the Commission on Dietetic Registration.

Appendix M: Thesis Oral Defense Presentation

Measuring the Impact of Leadership and Professionalism Training on Dietetic Students

Jessica Frein
Oral Defense
May 26, 2006

Overview

- Rationale for research and statement of the problem
- Leadership definitions and approaches
- Previous research
- Leadership and dietetics
- Pilot study and key findings
- Future research

Statement of the Problem

To determine if implementation of a pilot leadership and professionalism development program meets the expressed needs of dietetic students at the University of Wisconsin – Stout by fostering growth in leadership and professionalism practices

Objectives

- Examine the effects of a pilot leadership and professionalism program
  - Implement a multi-faceted program
  - Determine if leadership practices exist
  - Evaluate student progress
  - Evaluate perceived leadership practices
  - Determine role of demographic factors

Leadership Definitions

- James MacGregore Burns

"leaders induce followers to act
for certain goals that represent
the values and the motivations
– the wants and needs, the
aspirations and expectations –
of both leaders and followers".
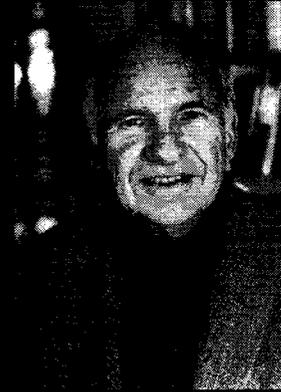
Leadership Definitions

- Kouzes and Posner
- "The Leadership Challenge"

"(leaders are) people who are willing to take
risks to innovate and experiment, in order
to find new and better ways of doing
things"

Leadership Definitions

■ ADA

" the ability to inspire and guide others toward building and achieving a shared vision"

Leadership Approaches

■ Gregoire and Arendt
■ Leadership: Reflections over the past 100 years
  – Traits
  – Behavior
  – Power/Influence
  – Situational
  – Reciprocal

Leadership Approaches

Modern Leadership Approaches

Situational Leadership

Transformational Leadership

Servant Leadership
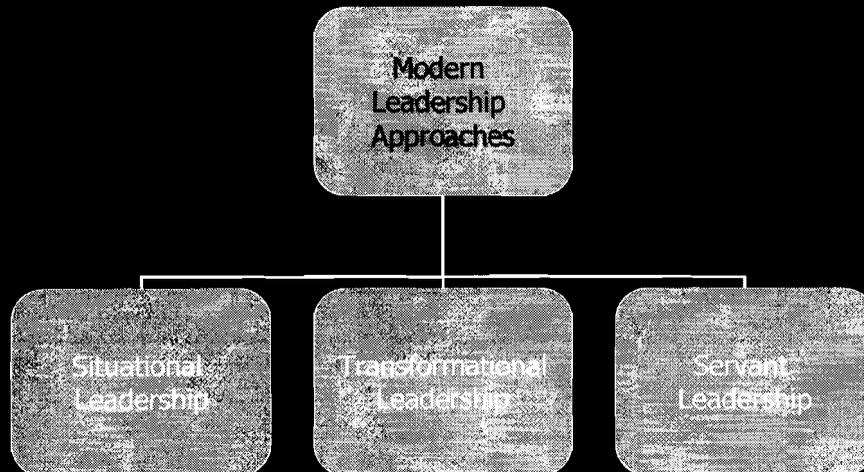
Situational Leadership

- Six variables affecting leadership according to situational models:
  - Subordinate effort
  - Subordinate ability and role clarity
  - Organization of work
  - Cooperation and cohesiveness
  - Resources and support
  - External coordination

Servant Leadership

- Based on moral values and beliefs
- Used as motivators

"Followership may be as critical to our understanding of leadership as leadership itself".

Transformational Leadership

- A leader is:
  - Inspiring
  - Energetic
  - Enthusiastic
- Leads others by:
  - Generating enthusiasm
  - Working through failures and successes
  - Develops synergy in a group yielding a greater combined effort

Social Change Model
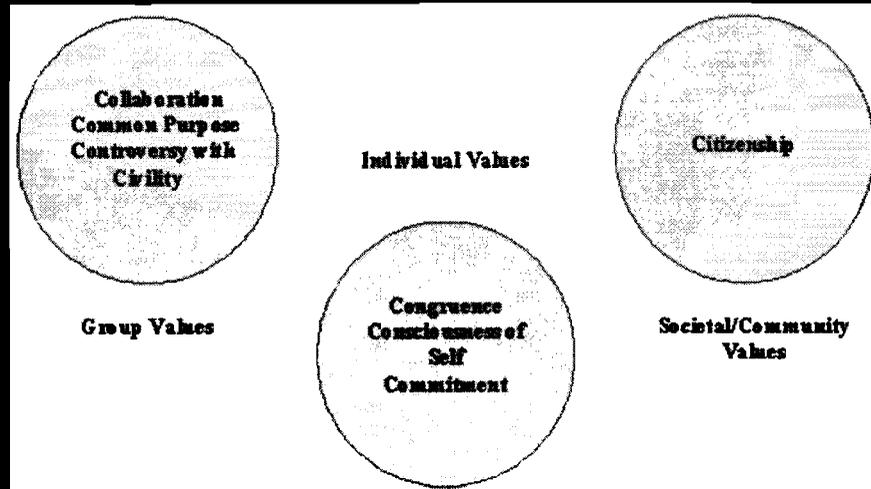
Researched Areas

- Leadership in Healthcare
- Student Leadership
- Leadership Programs
- Dietetic Leadership
- Student Professionalism
- Dietetic Professionalism
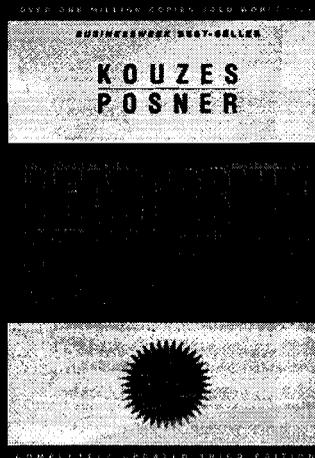
Leadership Program Requirements

- M.I.L.E.S. Leadership Conference
- Professionalism Seminar
- Individual Project Presentation
- WDA State Meeting Poster Session

Results: Demographic Questionnaire: Post-Program

| Question	Control (n=55) M	SD	Experimental (n=14) M	SD	df	t	P
6. How many organizations have you been involved with in your college career?	2.80	2.11	4.64	2.71	67	2.73	.01
7. How many work experiences have you obtained?	3.69	2.13	3.71	2.76	67	.035	NS
8. How many volunteer experiences have you been involved in to date?	3.46	2.65	5.86	3.09	67	3.28	.01
9. How many service projects have you taken part in?	1.89	2.23	4.07	3.32	16	2.33	.05
10. How many honors or awards have you received?	3.15	2.46	5.00	2.60	67	2.47	.05
11. How many leadership and/or professionalism training programs have you attended?	1.18	1.66	3.14	3.18	13	2.23	.05
12. How many leadership and professional organizational meetings have you attended?	2.62	3.26	1.00	3.01	67	1.13	NS
13. How many leadership seminars/conferences/courses did you attend during the 2005 spring semester?	0.31	0.66	2.57	0.94	67	10.43	.001
14. How many professionalism seminars/conferences/courses did you attend during the 2005 spring semester?	0.25	0.55	2.36	1.31	14	5.76	.001

Results: Independent Dietetic Professionalism Assessment

- Varied differences pre and post-program
- High internal reliability – combined into a composite score
- No significant differences
  - Trend for difference between groups in pre and post composite scores for control and experimental:
    - Pre: $p = .056$ (M=106.3, M = 111.1, respectively)
    - Post: $p = .051$ (M = 107.5, M = 118.3, respectively)
- Graduate composite scores were found to be higher than undergraduate scores
- Positive correlations between the IDPA and the five leadership practices

Results: Observer SLPI

Leadership Practice	Supervisor		Peer		Experimental	
	M	SD	M	SD	M	SD
	27.29	2.84	26.36	3.37	25.86	2.77
	27.50	2.71	26.29	3.91	26.71	2.92
	27.79	2.99	28.00	2.54	28.00	2.60
	27.29	2.89	26.86	4.00	27.43	2.21
	27.93	2.79	27.21	3.42	27.43	2.62

Results: Pre-Program SLPI Scores - T-test

Leadership Practice	Control (n = 55)		Experimenta l (n = 14)				
	M	SD	M	SD	df	t	P
	21.53	3.93	23.29	4.16	67	1.48	NS
	22.44	4.32	24.50	4.24	67	1.60	NS
	24.55	3.35	26.57	2.65	67	**2.10**	**.05**
	22.93	4.00	24.71	4.48	67	1.46	NS
	23.80	5.02	25.71	3.63	67	1.34	NS

Results: Post-Program SLPI Scores - T-test

Leadership Practice	Control (n = 55)		Experimental (n = 14)				
	M	SD	M	SD	df	t	p
	22.80	4.14	25.86	2.77	67	**2.61**	**.05**
	23.40	4.84	26.71	2.92	67	**2.44**	**.05**
	25.07	3.28	28.00	2.60	67	**3.10**	**.01**
	23.31	4.63	27.43	2.21	67	**3.22**	**.01**
	23.53	5.60	27.43	2.62	45	**3.79**	**.001**

Results: ANOVA

Leadership Practice	Control (n 55)		Experimental (n 14)		df	F	Sig.
	M	SD	M	SD			
Challenging the Process.	22.80	4.13	25.85	2.77	1	**4.44**	.05
Inspiring a Shared Vision.	23.40	4.84	26.71	2.92	1	3.41	NS
Enabling Others to Act.	25.07	3.28	28.00	2.60	1	**4.86**	.05
Modeling the Way.	23.31	4.63	27.43	2.21	1	**8.17**	.01
Encouraging the Heart.	23.53	5.60	27.43	2.62	1	**4.65**	.05

Comparisons of Reliability Coefficients

Leadership Practice	Kouzes and Posner (1998)	Arendt (2004)	Frein (2005)
	Alpha	Alpha	Alpha
Challenging the Process	.66	.55	
Inspiring a Shared Vision	.79	.76	
Enabling Others to Act	.70	.62	
Modeling the Way	.68	.67	
Encouraging the Heart	.80	.73	.65

Main Limitations

- Sample size
- Sample selection
- Individual experiences
  - MILES Program
  - WDA meeting
  - Additional participation
- Timing of administration of assessment tools

Conclusion

- Continued research
- Further development of leadership programs
- Leadership supplementation to dietetic academic programs
- Push for more ADA involvement

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