To the Graduate Council:

I am submitting herewith a thesis written by Theresa Marie Cornelius entitled "The Relationship Between Creativity and Leadership Traits Among Dietetic Professionals." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Dr. Paula Zemel, Major Professor

We have read this thesis and
recommend its acceptance :

Accepted for the Council :

Associate Vice Chancellor and Dean of the
Graduate School

The Relationship Between Creativity and Leadership Traits Among Dietetic Professionals

A Thesis
Presented
for the Master of Science
Degree
The University of Tennessee, Knoxville

Theresa Marie Cornelius
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DEDICATION

This thesis is dedicated to my husband. Without his support, love and understanding this thesis would not have been completed.

ACKNOWLEDGMENTS

I would like to thank Dr. Paula Zemel, my major professor, for her guidance in assisting me in completing this project. Additionally, I would like to thank my other committee members, Dr. Deborah Tegano, Dr. Betty Ruth Carruth, and Dr. Al Grant for their assistance. Additionally, I would like to thank Charles Martin, Ph.D., a staff psychologist at the Center for Psychological Type for his assistance in determining how to properly calculate the Myers-Briggs Type Indicator-Creativity Index.

ABSTRACT

The health care system is rapidly changing. In order to survive as a profession, dietetic professionals need to know about health care innovations and adapt to them. Leadership theories, such as transformational leadership may facilitate this adaptation. Transformational leaders are persuasive, creative, intuitive and have the ability to enhance these skills in others. This type of leadership facilitates organizational change and may be enhanced by creativity. Zemel and colleagues found that in Public Health Nutritionists the performance of both the innovator and broker roles were performed significantly less often than other leadership roles. These roles are paramount to dietetic professionals adapting to the ever-changing health care system. An assessment of the performance of innovator and broker roles associated with creativity among health care professionals may provide an understanding of how to adapt to future changes in health care.

To measure transformational leadership role performance, the Competing Values Leadership Profile was used. It is based on the Competing Values Profile Conceptual framework developed by R. E. Quinn and it combines several management theories. This model describes the interrelationship among eight leadership roles. Four roles depict traditional

transactional roles (monitor, coordinator, director, and producer) and four transformational leadership roles (facilitator, mentor, innovator and broker).

To measure creativity a Myers-Briggs Type Indicator-Creativity Index was utilized. For the purpose of this research project creativity was defined in terms of personality. Creativity has been found to be related to increased independence, nonconformity, receptivity to new ideas, and lower anxiety levels.

Data were obtained during the Advanced Public Health Nutrition Professional Leadership Education (APPLE) project; there were 342 participants. Analyses were performed with the Statistical Package for Social Science software for IBM PC (version 7.5, 1996, SPSS, Chicago, IL) using a .05. significance level.

Pearson product-moment correlation coefficients were used to determine the relationship between MBTI-Creativity Index and performance of innovator and broker roles. *T* tests and ANOVA were performed to identify differences for MBTI-creativity index and performance of innovator and broker roles based on selected characteristics of participants. Tukey's mean separation technique was used to detect differences when F was significant.

Dietetic professionals with twenty five or more years of experience were found to perform innovator and broker roles more frequently than those with less than fifteen years experience ($P<.05$.). Respondents with master's degrees were found to be more creative and performed innovator and broker roles more frequently than dietetic professionals with bachelor's degrees ($P=.01$.). Registered Dietitians were found to perform the broker role more frequently than non-registered dietetic professionals ($P=.02$.). There was a positive correlation between creativity scores and the performance of innovator ($r=0.38$; $P=.001$.) and broker roles ($r=0.27$; $P=.001$.).

These results indicate a need for professional preparation for leadership, that fosters creativity development. This study has also shown a need to improve retention of experienced staff and to provide educational opportunities for dietetic professionals. Additionally, more research is necessary to identify factors that contribute to creativity and the performance of innovator and broker roles.

PREFACE

This thesis was written in two parts. Part I contains the introduction, background, research hypothesis, and significance of the research. Part II contains a professional research article with a short literature review and methodology, results, discussion and application sections. Both Part I and Part II have separate tables and bibliographies.

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Part I:
Introduction, Background and Significance of Research

INTRODUCTION

Problem Statement

The health care system is rapidly changing in today's society [1-6]. These changes necessitate a new approach to leadership in order to embrace innovation and encourage creativity. Health professionals, including dietetic professionals, especially need to be adaptable to changes in the health care market [7].

Transformational Leadership

Transformational leadership has been identified as an approach that is well-suited to the changes occurring in health care. Transformational leadership actively embraces and encourages innovation and change. This form of leadership is a process in which leaders seek to shape and alter the goals of their followers [8].

Transformational leaders frequently exhibit charismatic traits that facilitate energy and drive colleagues toward a common vision [8]. Colleagues are often empowered and energized themselves. This results in coworkers being inspired to take action that is not based on their individual needs but on the vision and goals of the organization. Transformational leadership facilitates organizational change and may be enhanced by creativity [8]. Thus, an

assessment of transformational leadership roles and creativity among health care professionals, such as dietetic professionals, may provide an understanding of how to adapt to future changes in health care.

A leadership theory that can adapt to innovations is particularly useful in changing environments such as health care. The Competing Values Profile Conceptual Framework, developed by organizational management theorist R. E. Quinn, combines several management theories (Figure 1). This model describes the interrelationship between eight leadership roles.

Four roles depict traditional transactional leadership and four describe transformational leadership. The four transactional roles include monitor, coordinator, director and producer. The four transformational roles include facilitator, mentor, innovator and broker [9]. Quinn also developed a plan for leadership development using this model, which could be implemented in health professions such as dietetics [9].

Creativity

Creativity has numerous definitions [10,11] . For the purpose of this research project, creativity was defined in terms of personality. Creativity has been related to increased independence, nonconformity, receptivity to new ideas,

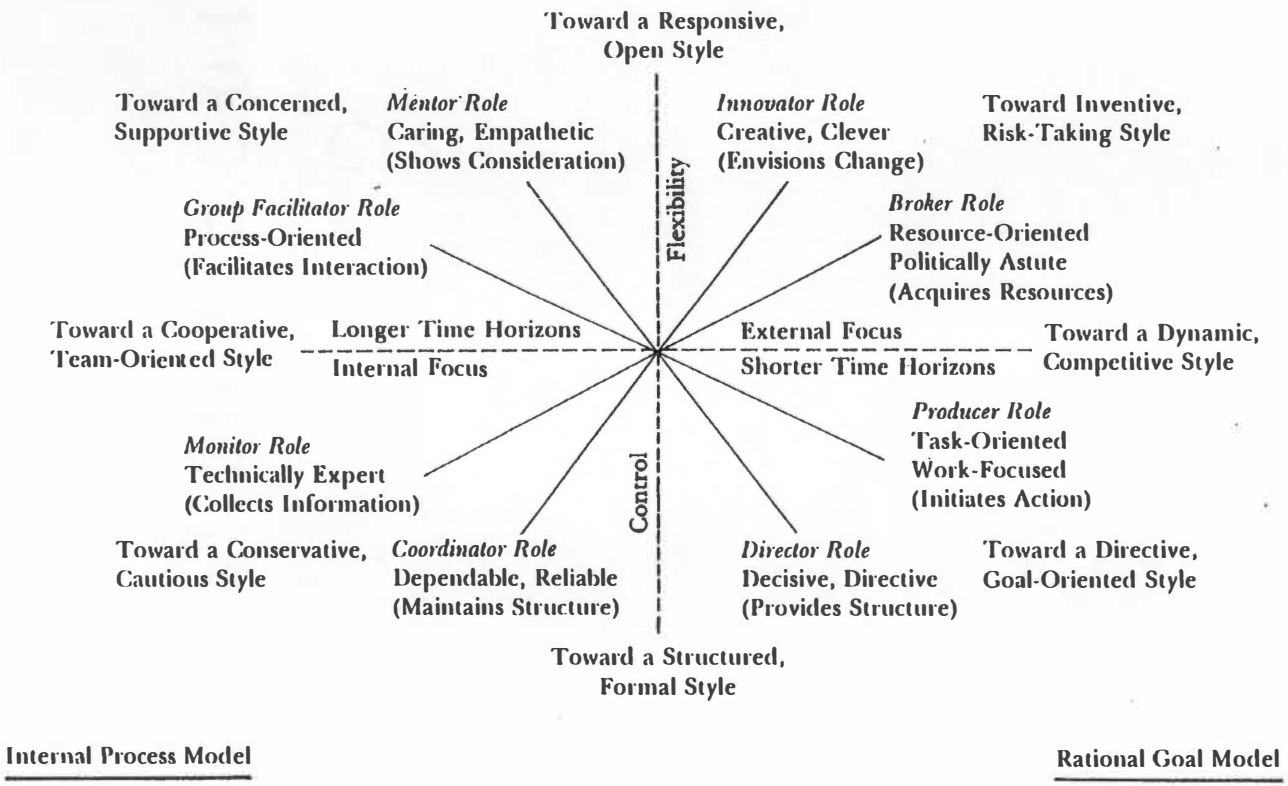

Figure 1.
Competing Values Framework of Leadership Roles. Taken from: Quinn RE. *Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance.* San Francisco, CA: Jossey-Bass Publishers, 1988.

and lower anxiety levels [11-13]. One measurement of creativity was developed from Myers-Briggs Type Indicator (MBTI) instrument. This instrument is based on Carl G. Jung's theory of psychological types. Two of the MBTI psychological types, perception and intuition, have been associated with creativity [14,15].

Leadership Among Dietetic Professionals

Changes in the health care system necessitate recognition of the differences between managers and leaders. Managers know the right things to do, while leaders know the right way to do them [16]. Two major leadership styles, transactional (traditional) and transformational have been described. The most effective leaders in current and future health care settings will tend to have more transformational leadership attributes than transactional [17]. There have been several studies on leadership trends in nutrition. Arensberg and colleagues found that transformational leadership was more likely to be found during crisis situations, in leaders with a master's degree or higher, and in larger hospitals. They also found that visionary leadership skills, which are important to inspire colleagues, are lacking in dietitians [7]. Zemel and colleagues found that of the transformational roles, dietetic professionals per-

formed innovator and broker roles less frequently than the other leadership roles (18).

There has not been an assessment of leadership skills of dietetic professionals that addresses creativity and its relationship to innovator and broker leadership roles. Assessing creativity as well as innovator and broker role performance may provide a basis for leadership development of dietetic professionals for future change. Therefore, the purpose of this research project is to investigate the relationship between the performance of innovator and broker leadership roles and scores on the MBTI-Creativity Index among dietetic professionals.

Specific Aims

Thus, the aims of this project were threefold:

1. Derive the performance of innovator and broker roles among dietetic professionals from the Competing Values Leadership Profile: Self-Assessment Survey;

2. Calculate the creativity scores of dietetic professionals by utilizing the continuous scores for each personality index derived from the MBTI; and

3. Determine the relationship between the performance of innovator and broker leadership roles and creativity scores.

Therefore, this study was planned to answer the following research hypotheses:

- There is a relationship between MBTI-Creativity Index scores and the performance of innovator and broker roles among dietetic professionals.

- There are differences among MBTI-Creativity Index scores of dietetic professionals by:
  - state of residence,
  - years of experience,
  - education status, and
  - Registered Dietitian status.

- There are differences in performance of innovator and broker roles among dietetic professionals by:
  - state of residence,
  - years of experience,
  - education status, and
  - Registered Dietitian status.

BACKGROUND AND SIGNIFICANCE

The health care system is rapidly changing. In order to survive as a profession, dietetic professionals need to know about health care innovations and adapt to them. The primary role of leaders in the health care system is to empower others to be leaders, also. Transformational leaders are persuasive, creative, intuitive, and have the ability to enhance these skills in others[16]. Thus, an assessment of transformational roles and creativity

among dietetic professionals may provide an understanding of how to adapt to future innovations.

Transformational Leadership

The changes in societal and health care demands require a leadership theory that can change with the system. Transformational leadership is an approach that is well-suited to integrating these changes. There are three main qualities of a transformational leader: individual consideration, charisma and intellectual stimulation (19).

The management quality of charisma can empower colleagues and facilitate cooperation. Creative dietetic professionals with charisma can help shape the future of the profession (20). The profession of dietetics can evolve to an advanced level of leadership through the development and implementation of the qualities and strategies of transformational leadership (4).

Creativity

The MBTI-Creativity Index was developed from twenty years of creativity research by the Institute of Personality Assessment and Research (IPAR). This index is based on the comparison of the distribution of psychological types across highly creative individuals and across the general population (21). The frequency of the intuitive personality type in the general population

is only twenty-five percent, while nearly all of the creative men in the IPAR sample preferred the intuitive personality type [15,21]. A creative individual also has a preference for the perceptive personality type [15]. MacKinnon has found that creative individuals are strongly motivated to achieve when independent thought and action are required [15]. Creative adults focus on possibilities and perceptions of deeper meaning. There is a strong association between intuition and perception with creativity throughout this area of research [15].

Tegano and colleagues used the MBTI-Creativity Index to investigate the relationship of tolerance and playfulness to creativity. They reported that creativity is related to playfulness and tolerance of ambiguity [12]. The MBTI-Creativity Index was derived from the following equation: (3N + P - I -1/2F), where N, P, I and F (defined in Table 1-1) are the continuous personality index scores derived from the MBTI results according to the procedures outlined by Myers-Briggs and McCaulley [12, 21].

Table 1-1
Description of personality types from Myers-Briggs Type Indicator (12, 21).

Personality Indices	Personality Type	Abbreviation	Description
Extroversion-Introversion	Extrovert	E	Energized by verbalizing thoughts and ideas
	Introvert	I	Energized by thoughts and ideas
Sensing-iNtuition	Sensor	S	Gathers information using six senses
	iNtuitive	N	Looks for possibilities, meanings, and relationships
Thinking-Feeling	Thinker	T	Makes judgements objectively
	Feeler	F	Makes judgements subjectively
Judging-Perceiving	Judger	J	Is decisive, prefers planning and control
	Perceiver	P	Is spontaneous, flexible and adaptable

Leadership Among Dietetic Professionals

Because of the innovations in the health care system there is a need to recognize the difference between leaders and managers. Leaders know the right way to do things, while managers know the right things to do (16). There have been several studies on leadership trends among health care professions such as dietetics. Zemel and colleagues found that dietetic professionals performed the innovator and broker roles less frequently than the other six roles (monitor, coordinator, director, producer, facilitator and mentor) (18). Envisioning change, acquiring resources, creative decision making and risk taking are indicative of innovator and broker roles (18). This suggests there is a need to strengthen these leadership roles among dietetic professionals.

There has not been an assessment of dietetic professionals' performance of leadership roles that addressed innovator and broker leadership roles and creativity published in the dietetic literature. Assessing the performance of innovator and broker roles and creativity may contribute to professional leadership development for future continuing education programs. Thus, an assessment of these transformational leadership roles and creativity among dietetic professionals may provide a better understanding of how to adapt to future innovations in health care.

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Part II
Relationship Between Creativity and Leadership Traits Among Dietetic Professionals

ABSTRACT

Objective This study determined the relationship between creativity and the performance of innovator and broker roles among dietetic professionals and the effect of various characteristics of dietetic professionals on the performance of these roles.

Design Secondary data analysis

Subjects/setting Data were collected during a professional video teleconference on leadership. Subjects were 343 dietetic professionals who voluntarily submitted Myers-Briggs Type Indicator scores and Competing Values Leadership Profile scores.

Statistical analyses performed Data were analyzed using the Statistical Package for Social Science software for IBM PC (version 7.5, 1996, SPSS, Chicago, IL) using a .05. significance level. Pearson product-moment correlation coefficients, *t* tests and ANOVA were performed. Additionally, Tukey's mean separation technique was used to detect differences when F was significant. All data were checked for normal distribution and equal variances before these parametric analyses were performed.

Results Dietetic professionals with more than twenty-five years experience performed innovator and broker roles more frequently than those with less than fifteen years experience (P<.05.). Respondents with master's degrees were found to be more creative (P=.01.) and performed the innovator role (P<.05.) more frequently than dietetic professionals with bachelor's degrees. Registered Dietitians were found to perform the broker role more frequently than non-registered dietetic professionals (P=.02.). There was a positive correlation between creativity scores and the performance of innovator(r=0.38; P=.001.) and broker roles (r=0.27; P=.001.).

INTRODUCTION

The rapidly changing health care environment necessitates that dietetic professionals adopt new leadership approaches (1, 2). Transformational leadership, a process in which leaders seek to shape and alter the goals of their coworkers, is one approach particularly well-suited to navigating changes occurring in health care (3). Transformational leaders are creative, intuitive, persuasive and have the ability to enhance these skills in others. They exhibit charismatic traits that facilitate energy and drive coworkers toward a common vision (4). Coworkers are empowered and inspired to take action that is not based on their individual needs but on the vision and goals of the organization

(4). Transformational leadership is enhanced by creativity and facilitates organizational change (5).

Several approaches have been used to evaluate leadership characteristics of managers (3). The Competing Values Leadership Profile (CVLP) conceptual framework is one approach that incorporates major management theories and measures performance of eight leadership roles. These eight roles can be divided into two major categories, transactional and transformational. These leadership roles are not mutually exclusive of one another. Dietetic professionals can perform more than one of these leadership roles at a time. Leadership roles and examples performed by dietetic professionals are shown in Table 2-1.

Of the transformational roles, Zemel and colleagues found both the innovator and broker roles were performed less frequently than other leadership roles in a group of dietetic professionals (6). Dietetic professionals who identify an emerging trend, look for career opportunities, and use skills in a new way are performing the innovator role. Dietetic professionals who become politically involved in causes that advance dietetics, publicly represent the dietetic profession, or negotiate for third-part reimbursement are performing

Table 2-1

Description of leadership roles that are measured by the Competing Values Leadership Profile and examples in Dietetics.

Type of Leadership	Leadership Role	What is expected	Behaviors	Dietetic Examples
Transactional	Monitor	• Know what is going on • Determine if rules are followed • Determine if quotas are met	• Handling paper work • Dealing with routine information • Inspections	Monitor effectiveness of medical nutrition therapy
	Coordinator	• Maintain structure and flow of organization	• Scheduling, organizing, and coordinating colleagues efforts • Crisis management • Address technological, logistic, and housekeeping issues	Schedule client flow in WIC clinic
	Director	• Clarify expectations • Make decisions	• Plan and set goals • Define roles and tasks • Make rules and policies • Evaluate coworkers performance • Provide instructions	Establish departmental mission and goals
	Producer	• Task orientation • Highly motivated • Personal initiative	• Motivate coworkers • Complete assignments • Accomplish goals	Develop food sanitation in-service
Transformational	Facilitator	• Foster collective effort • Build teamwork • Manage interpersonal conflict	• Handle interpersonal problems • Develop group cohesion and morale • Obtain group participation and input • Facilitate group problem solving	Lead dialysis team in policy and procedure development
	Mentor	• Develop coworkers	• Assist coworkers in skill building • Provide training opportunities • Assist coworkers to plan for their own development	Mentor a new dietetic professional
	Innovator	• Facilitate adaptation and change	• Envision innovations • Convince coworkers changes are needed and desirable	Develop new nutrition education program
	Broker	• Maintain outside legitimacy • Obtain resources	• Politically astute • Persuasive • Influential	Lobby for third party payment for dietetic services

Adapted from Quinn RE: Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance. San Francisco, CA: Jossey-Bass Publishers, 1988.

the broker role. These are all activities that are important in a changing professional environment.

The CVLP model proposes that dietetic professionals can improve their performance of leadership roles by developing and implementing a change strategy (7). The first step to leadership development is to learn more about oneself. This can be accomplished by completing the CVLP. Once dietetic professionals have learned more about themselves, they need to identify a mentor who has mastered areas in which they need professional development. For example, if dietetic professionals identify a need to enhance performance of the broker role, they need to find mentors who are actively involved in legislative activities. By observing how mentors work with legislative issues, dietetic professionals can develop a strategy for improvement of their own skills as brokers.

Another method for dietetic professionals to identify their approaches to leadership is to complete a self-assessment instrument such as the Myers-Briggs Type Indicator (MBTI). This instrument evaluates personality types based on Jung's theory of personality and provides a MBTI profile (8). The profile measures eight personality types that are assumed to be mutually exclusive components of four independent scales that assess these dichotomies:

Extroversion versus Introversion, Sensing versus iNtuition, Thinking versus Feeling and Judging versus Perceiving. These personality types are described in Table 2-2 (9).

Dietetic professionals can utilize their own MBTI scores and those of their coworkers to assist them in dealing with the changes in the health care environment (8). The more diverse a group's MBTI scores are, the more creative a project can be, provided differences are respected, authenticated, and integrated. Communication lines also need to remain open (10).

If an organization employs professionals with only one or two MBTI personality types, creativity can be limited. Thus, dietetic professionals can utilize the knowledge of their coworkers' MBTI profiles to facilitate creative problem-solving. Team members benefit by knowing their MBTI preferences and the meaning of their scores (10). This provides a better understanding of their own personality type as well as personality types of others.

Additionally, MBTI scores can be used to determine current creativity levels among dietetic professionals (11). The MBTI-Creativity Index is a personality based construct used to define creativity as the source of all innovations (12). Creative individuals are more receptive to new ideas and

Table 2-2

Description of personality types from Myers-Briggs Type Indicator (11,14).

Personality Indices	Personality Type	Abbreviation	Description
Extroversion-Introversion	Extrovert	E	Energized by verbalizing thoughts and ideas
	Introvert	I	Energized by thoughts and ideas
Sensing-iNtuition	Sensor	S	Gathers information using six senses
	iNtuitive	N	Looks for possibilities, meanings, and relationships
Thinking-Feeling	Thinker	T	Makes judgements objectively
	Feeler	F	Makes judgements subjectively
Judging-Perceiving	Judger	J	Is decisive, prefers planning and control
	Perceiver	P	Is spontaneous, flexible and adaptable

exhibit lower anxiety levels (11,13-16). These characteristics are important in the development of innovator and broker leadership roles. Due to rapid changes in health care, creative innovations are important for the advancement of the dietetic profession. Thus in leadership, creativity is important to the inherent risk-taking behaviors essential to the performance of the innovator and broker roles. Additionally, creativity is a dynamic characteristic that can be enhanced with appropriate continuing education (17-19).

Due to changes in societal and health care demands, there is a need for innovative leadership approaches among dietetic professionals. The CVLP and MBTI are instruments that provide valuable information about leadership qualities. Using these instruments, dietetic professionals can develop strategies to improve their leadership skills and to understand their coworkers better. An analysis of the performance of leadership roles, innovator and broker roles in particular, and their association with creativity among dietetic professionals may provide an understanding of how to adapt to future changes. Therefore, the current study was planned to determine the relationship between creativity and the performance of innovator and broker roles among dietetic professionals and differences among creativity scores and the per-

formance of innovator and broker roles by various characteristics among dietetic professionals.

METHODS

Subject Selection

Subjects were dietetic professionals who were public health nutrition personnel in the United Stated Public Health Service (USPHS) region IV, who voluntarily participated in the Advanced Public Health Nutrition Professional Leadership Education (APPLE) program (20). Region IV includes eight southeastern states in the United States (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee). Subjects attended a video teleconference at one of 31 sites and received a packet of materials containing research instruments prior to the video teleconference (6).

Instruments

There were two instruments utilized in this study: the Myers-Briggs Type Indicator (MBTI) and the Competing Values Leadership Profile (CVLP). The MBTIcontains 92 forced-choice questions that categorize people by their attitudinal, judgmental and perceptual preferences. Raw scores were converted into continuous scores according to the procedures outlined

by Myers-Briggs and McCaulley (11). The results were categorized into a profile. Pittenger reported the test-retest reliability of CVLP to be 0.83 (9).

The MBTI-Creativity Index was developed from MBTI scores over a twenty-year period. The MBTI-Creativity Index was calculated from the following equation: (3N + P - I - 1/2F), where N, P, I and F (defined in table 2-2) are continuous scores derived from MBTI test results according to the procedures outlined by Myers-Briggs and McCaulley (11). This index is based on the comparison of the distribution of psychological types across highly creative individuals as well as the general population. MBTI-Creativity Index scores above 350 were considered to have a high potential for creativity at that time, while those below 250 were considered to have a low potential for creativity at that time (11).

The CVLP contains 32 behavior-based items that were assessed using a 7-point Likert-like scale. Quinn based this instrument the on analysis of responses of more than 600 employees (7). The determination of the frequency of eight leadership roles is based on responses to four questions for each leadership role. Quinn found this instrument to have loading scores that range from 0.4 to 0.75 with a factor analysis range from 0.72 to 0.90 (7). The

CVLP also has been found to be an effective tool for continuing education programs on leadership development (7).

Data Collection and Analysis

Instruments and instructions were mailed to each APPLE program registrant prior to the video teleconference. The MBTI was completed and self-scored prior to the video teleconference. The CVLP was completed during the video teleconference. Assessments were completed on three-part carbonless forms and copies of all raw data were returned to researchers by a moderator at each site. All instruments were evaluated and data from useful forms were entered into a database (Microsoft Excel version 7.0a, 1996, Microsoft, Boston, MA) and verified for accuracy.

Pearson product-moment correlation coefficients were used to determine the relationship between MBTI-Creativity Index and performance of innovator and broker roles. *T* tests and ANOVA were performed to identify differences for MBTI-creativity index and performance of innovator and broker roles based on selected participant characteristics. Tukey's mean separation technique was used to detect differences when F was significant.

All data were checked for normal distribution and equal variances before these parametric analyses were performed (21). Analyses were per-

formed with the Statistical Package for Social Science software for IBM PC (version 7.5, 1996, SPSS, Chicago, IL) using a .05. significance level. This study was approved by the Office of Research Compliance at the University of Tennessee.

RESULTS

A total of 353 dietetic professionals participated in the APPLE video teleconference; 343 (97%) returned usable instruments. Fifty-five percent of the respondents had completed a master's degree and the remainder had completed a bachelor's degree. Fifty-eight percent of the respondents were Registered Dietitians and average experience in dietetics of all respondents was 13.8 +/- 9 years (mean +/- standard deviation). Their mean MBTI-Creativity Index score (+/- standard deviation) was 210 +/- 105 with a range of -29 to 488. Additionally, respondents represented all eight southeastern states from U.S. Public Health Service Region IV.

Frequency of performance of leadership roles by dietetic professionals is shown in Table 2-3. Role performance ranged from 4.6 (occasionally) for the broker role to 5.6 (frequently) for the mentor role. Personality types of

Table 2-3

Mean scores of the performance of leadership roles by dietetic professionals from the Competing Values Leadership Profile .[a, b]

Leadership Type	Leadership Role	Mean +/- standard deviation
Transactional	Monitor	4.8 +/- 1.0
	Coordinator	5.2 +/- 0.8
	Director	4.9 +/- 1.1
	Producer	5.1 +/- 1.0
Transformational	Facilitator	5.2 +/- 0.9
	Mentor	5.6 +/- 1.0
	Innovator	4.9 +/- 0.9
	Broker	4.4 +/- 1.0

[a] n = 343

[b] Range of Scores = 1-7

dietetic professionals from MBTI are shown in Table 2-4. The number of respondents in each personality type and the percentage of respondents in each continuous scale are given. The most frequent personality profile was Introvert-Sensor-Thinker-Judger (ISTJ).

The relationship between four characteristics of dietetic professionals (state of residency, years of experience, education status and Registered Dietitian status) and MBTI-Creativity Index scores and the performance of innovator and broker roles was also assessed. To determine if there were significant differences in creativity and performance of innovator and broker roles, state of residency or years of experience were analyzed using ANOVA. The results of these ANOVA analyses are summarized in Table 2-5. There were no significant differences found in creativity or the performance of innovator and broker roles performance resulting from respondents' state of residency. However, there were significant differences in the performance of both innovator and broker roles by years of experience (P=.01. for both). Thus, Tukey's adjustment for multiple comparisons was performed to determine how the performance of innovator and broker roles varied by years of experience (Table 2-6). Results of Tukey's test indicate that dietetic professionals

Table 2-4

Frequency and percentage of personality types of dietetic professionals as indicated by the Myers-Briggs Type Indicator. [a]

Personality Indices	Personality Type	Frequency	% [c]
Extroversion-Introversion[b]	**E**xtrovert	156	47.6
	Introvert	172	52.4
Sensing-iNtuition	**S**ensor	196	59.8
	i**N**tuitive	132	40.2
Thinking-Feeling	**T**hinker	191	58.2
	Feeler	137	41.8
Judging-Perceiving	**J**udger	238	72.6
	Perceiver	90	27.4

[a] n = 343

[b] n= 328 for each of 4 continuous scales

[c] each continuous scale sums to 100%

Table 2-5

Effect of state of residency and years of experience on Myers-Briggs Type Indicator-Creativity Index scores and performance of innovator and broker roles.

Factor	Variable	N	F	Significance
State of Residency	Myers-Briggs Type Indicator-Creativity Index	323	1.765	0.09
	Broker	343	0.716	0.66
	Innovator	343	0.817	0.57
Years of Experience	Myers-Briggs Type Indicator-Creativity Index	297	0.375	0.9
	Broker	316	3.588	0.01 **
	Innovator	316	3.347	0.01 **

*P< .01.

Table 2-6

Effect of years of experience on the mean scores +/- standard deviation of performance of innovator and broker roles among dietetic professionals.

Years Experience	N	Broker	Innovator
< 5*	64	4.1 +/- 0.9	4.7 +/- 0.8
6-10 *	73	4.3 +/- 1.0	4.8 +/- 0.8
11-15 *	65	4.3 +/- 1.0	4.7 +/- 0.8
16-20	50	4.6 +/- 1.1	5.0 +/- 1.1
21-25	32	4.4 +/- 0.9	4.8 +/- 0.8
25 +	33	4.9 +/- 1.0	5.4 +/- 0.7

* Different from 25 + years with $P<.05$.

with more than 25 years experience performed innovator and broker roles significantly more often than dietetic professionals with less than 15 years experience.

To determine if there were significant differences in creativity and the performance of innovator and broker roles by education status, *t* tests were performed (Table 2-7). Dietetic professionals with master's degrees were found to have higher creativity scores (P=0.01.) and performed the innovator role (P=0.047.) more frequently than dietetic professionals with only a bachelor's degree. The performance of the broker role was not significantly affected by education level. A *t* test was also used to determine if there were significant differences in creativity and the performance of innovator and broker roles by Registered Dietitians compared to non-registered dietetic professionals (Table 2-8). It was found that Registered Dietitians performed the broker role significantly more often than non-registered dietetic professionals (P=0.02.). Additionally, creativity scores and the performance of the innovator role were not higher among Registered Dietitians.

The final analysis determined the relationship between creativity scores and the performance of innovator and broker roles. The Pearson product-moment correlation coefficient indicates a moderately significant

Table 2-7

Effect of education on creativity and the performance of innovator and broker roles among dietetic professionals.

Factor	Variable	N	Mean +/- standard deviation	T	Significance
Creativity					
	Bachelor	133	191.15 +/- 106.4	-2.56	0.01 **
	Master	163	221.93 +/- 101.5		
Innovator					
	Bachelor	143	4.7 +/- 0.83	-1.99	0.047 *
	Master	169	4.9 +/- 0.92		
Broker					
	Bachelor	143	4.3 +/- 0.97	-2.025	0.44
	Master	169	4.5 +/- 1.01		

* P<.05.

** P<.01.

Table 2-8

Effect of Registered Dietitian status on creativity and the performance of innovator and broker roles among dietetic professionals.

Factor	Variable	N	Mean	T	Significance
Creativity	Registered dietitian	180	208.4 +/- 107.4	-0.235	0.82
	Non-registered dietitian	132	211.2 +/- 100.8		
Innovator	Registered dietitian	189	4.86 +/- 0.82	0.47	0.64
	Non-registered dietitian	140	4.82 +/- 0.97		
Broker	Registered dietitian	189	4.52 +/- 0.97	2.409	0.02*
	Non-registered dietitian	140	4.25 +/- 1.0		

correlation between MBTI-Creativity Index and the performance of innovator (r=0.38; P=.001.) and broker roles (r=0.27; P=.001.) (Table 2-9). R^2 values of 0.14 and 0.08 respectively, indicate that creativity explains fourteen percent of the performance innovator role and eight percent of the performance of the broker role.

DISCUSSION

There were two main objectives of this project. First, differences among creativity scores and the performance of innovator and broker roles by various characteristics among dietetic professionals were evaluated. Additionally, the relationship between creativity and the performance of innovator and broker roles among dietetic professionals was assessed.

Professional Leadership Skills

This study found that several characteristics of dietetic professionals were significantly associated with the performance of innovator and broker roles: Registered Dietitian status, level of education and years of experience in professional practice. Registered Dietitians performed the broker role more frequently than non-registered dietetic professionals. The professional preparation for a registered dietitian is unique because it requires a dietetic internship following completion of an Approved Didactic Program in

Table 2-9

Relationship between Myers-Briggs Type Indicator-Creativity Index (MBTI-Creativity Index) and the performance of broker and innovator roles.

Statistic	Variable	MBTI-Creativity Index	Broker	Innovator
Pearson R	Creativity Index	--	0.27 **	0.38 **
	Broker			0.58 **
R^2	Creativity Index	--	0.08 **	0.14 **
	Broker			0.34 **

** P<.01.

Dietetics. These programs expose students to a variety of practice settings.

The American Dietetic Association (ADA) sets the guidelines for dietetic internships which consist of forty-seven core competencies. One of these core competencies addresses the broker role directly: "participate in legislative and public policy processes as they affect food, food security, and nutrition" (22). Additionally, some dietetic internships provide students opportunities to explore new areas of dietetic practice. For example, in a conversation with Karen Balnicki, MS, RD, LDN (June 1997), one internship program provides students with the option to spend a week or two of their internship in non-traditional dietetic roles, such as rotations with Registered Dietitians working at Weight Watchers magazine, Willough, Inc., Knox County Genetic Center, and the Burn Unit at Erlanger Hospital. This particular internship program can expose students to dietetic professionals who can model the innovator role and creativity in practice.

Additionally, in a national Delphi survey, public health nutritionists' identified that development of political issues and policy influencing were very important continuing education needs of public health nutritionists. They also identified understanding legislative and political processes as one of the

most important knowledge areas and skills needed in the twenty-first century (23). Performance of the broker role is important to all these issues.

Results also indicate that dietetic professionals who have completed master's degrees performed the innovator role more frequently than dietetic professionals who have completed bachelor's degrees. Arensberg and colleagues also reported that dietetic professionals who practiced transformational leadership skills were more likely to have completed master's degrees (3).

Additionally, it was found that dietetic professionals with more than 25 years experience performed the innovator and broker roles more frequently than dietetic professionals with less than 15 years experience. There was a trend toward more frequent performance of these roles as years of experience increased, suggesting that the performance of the innovator and broker roles also is learned through experience. Kane and colleagues found in Phase 1 and 2 of the 1995 Commission of Dietetic Registration Dietetic Practice Audit that dietetic professionals' level of responsibilities tends to increase with years of experience (24). This could explain why performance of innovator and broker roles increases with years of experience.

Personality Types

This study found the most frequent MBTI profile was Introvert-Sensor-Thinker-Judger (ISTJ). Kroeger found that the majority of middle managers also had the MBTI profile of ISTJ (25). He describes this profile as "the responsible type." They are organized, productive and accountable. ISTJs make decisions objectively. They are slow to change. Once they see the value in the adaptation, they can quickly implement it (25). Thus, dietetic professionals tend to be most adept at dealing with facts and figures but can adapt to change. This indicates a need for continuing education programs to enhance creativity and "people skills."

Creativity

This study found that dietetic professionals who have completed master's degrees were more creative than dietetic professionals who have only completed bachelor's degrees. Graduate education is professional education. It can prepare dietetic professionals to meet the challenges they face in the health care environment (26). Graduate students write reports, plan and do research, critique reports of others, and participate in peer-group discussion. Enright and Gitomer found that all these activities are associated with creativity and that successful graduate students tend to be creative (27).

The mean of the MBTI-Creativity Index in this study was found to be lower than mean scores derived from the MBTI database at the Center for Applied Psychological Type (CAPT) (232.55 +/- 98.07, n=16,880) (11). A preference for iNtuition has been found to be associated with creativity (11). Thus, the lower creativity scores among dietetic professionals may be a result of the majority of the respondents having a preference for Sensing rather than iNtuition (11, 28).

Research suggests that professionals can work with other professionals who have opposite MBTI profiles in order to enhance communication and team building to create innovative solutions (29). Through the development of respect for new points of view, dietetic professionals can create innovative solutions and adapt to changing societal and health care demands.

A positive correlation between creativity and the performance of innovator and broker roles was found in this study. Further research is needed to determine if developing creativity in dietetic professionals will increase performance of innovator and broker roles in professional practice.

This study had some limitations. The subjects were a convenience sample of participants in a video teleconference. It would have been optimal if they had been randomly selected from dietetic professionals employed in

USPHS Region IV, but this was not feasible. Also, age was not included in the statistics, since approximately one-third of the respondents omitted it from their forms.

APPLICATIONS

Professional Preparation for Leadership

The results of this study indicate that there is a relationship between creativity and the performance of innovator and broker roles among dietetic professionals. This study suggests that there is a need to improve retention of experienced staff and to provide education opportunities for all dietetic professionals. The performance of innovator and broker roles can be enhanced through the retention of experienced dietetic professionals or the recruitment of mature dietetic professionals. They perform these roles significantly more than dietetic professionals with less than fifteen years experience. Additionally, experienced staff members can model broker and innovator roles so younger inexperienced dietetic professionals can learn how to perform these important leadership roles.

This study suggests that dietetic professionals should be encouraged to obtain graduate degrees and obtain the Registered Dietitian credential. The educational process involved in obtaining either a graduate degree or Regis-

tered Dietitian status may enhance creativity. Also, dietetic internships need to introduce students to experiences outside of traditional settings. This may provide modeling of transformational leadership and creativity for students. The jobs of the future will not be in acute care facilities. They will be within community settings (30).

Additionally, more research is needed to identify the factors that contribute to creativity and the performance of innovator and broker roles. A continuing education intervention that fosters creativity development with a pre-test, post-test and long-term follow-up may help determine the impact of leadership and creativity on professional practice.

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APPENDICES

APENDIX A
MYERS-BRIGGS TYPE INDICATOR



Myers-Briggs Type Indicator®

Form G — Self-Scorable Question Booklet

Katharine C. Briggs
Isabel Briggs Myers

Due to copyright laws, the Myers-Briggs Type Indicator was not included. Anyone wishing a copy of this instrument can write:

Consulting Psychologist Press, Inc.
3803 E. Bayshore Road
Palo Alto, CA 94303

APPPENDIX B
COMPETING VALUES LEADERSHIP PROFILE

Print Legibly!

Date _____ Name _____ City _____ State _____

Teleconference Site _____ Coordinator _____

Competing Values Leadership Profile: Self-Assessment

Listed below are some statements that describe management behaviors. You should indicate how often you engage in these behaviors in your workplace or other settings. Please use the following scale to respond to each statement. Place a number from 1 to 7 in the space before each phrase.

1. Almost Never
2. Very Seldom
3. Seldom
4. Occasionally
5. Frequently
6. Very Frequently
7. Almost Always

1. _____Comes up with inventive ideas.
2. _____Protects continuity in day-to-day operations.
3. _____Exerts upward influence in the organization.
4. _____Carefully reviews detailed reports.
5. _____Maintains a "results" orientation in the unit.
6. _____Facilitates consensus building in the work unit.
7. _____Defines areas of responsibility for subordinates.
8. _____Listens to personal problems of subordinates.
9. _____Minimizes disruptions to the work flow.
10. _____Experiments with new concepts and procedures.
11. _____Encourages participative decision making in the group.
12. _____Makes sure everyone knows where the unit is going.
13. _____Influences decisions made at higher levels.
14. _____Compares records, reports, and son on to detect discrepancies.
15. _____Sees that the unit delivers on stated goals.
16. _____Shows empathy and concern in dealing with subordinates.
17. _____Works with technical information.
18. _____Gets access to people at higher levels.
19. _____Sets clear objectives for the work unit.
20. _____Treats each individual in a sensitive, caring way.
21. _____Keeps track of what goes on inside the unit.
22. _____Does problem solving in creative, clever ways.
23. _____Pushes the unit to meet objectives.
24. _____Encourages subordinates to share ideas in the group.
25. _____Searches for innovations and potential improvements.
26. _____Clarifies priorities and direction.
27. _____Persuasively sells new ideas to higher-ups.
28. _____Brings a sense of order into the unit.
29. _____Shows concern for the needs of subordinates.
30. _____Emphasizes unit's achievement of stated purposes.
31. _____Builds teamwork among group members.
32. _____Analyzes written plans and schedules.

SOURCE: Beyond Rational Management by R.E. Quinn.

Worksheet for Self-Assessment

Write below your score (1-7) for each statement from the list of 32 behaviors. ADD the scores for each of the 8 roles below. Divide each total by 4 to determine the final score for each. Plot your final score for each role in the circle graph below. Connect the points to determine your own profile.

The Facilitator
#6 ____
#11 ____
#24 ____
#31 ____
Total ____ + 4 = ____

The Mentor
#8 ____
#16 ____
#20 ____
#29 ____
Total ____ + 4 = ____

The Innovator
#1 ____
#10 ____
#22 ____
#25 ____
Total ____ + 4 = ____

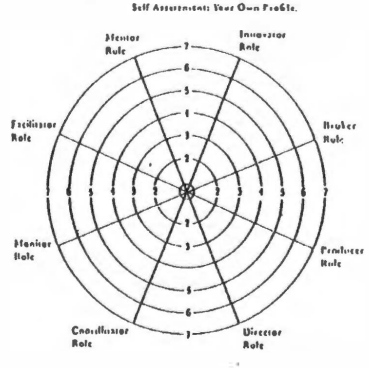
The Broker
#3 ____
#13 ____
#18 ____
#27 ____
Total ____ + 4 = ____

The Producer
5 #6 ____
1.5 #15 ____
2.3 #24 ____
3.0 #31 ____
Total ____ + 4 = ____

The Director
#7 ____
#12 ____
#19 ____
#26 ____
Total ____ + 4 = ____

The Coordinator
#2 ____
#9 ____
#21 ____
#28 ____
Total ____ + 4 = ____

The Monitor
#4 ____
#14 ____
#17 ____
#32 ____
Total ____ + 4 = ____



Instructions for Completing the

"Competing Values Leadership Profile" Self-Assesssment

This form was also used in the first APPLE Teleconference. Your leadership profile may change over time. Feel free to make a copy of the form and ask a peer or your supervisor to rate you also. Read on the back of this page to find out more about the 8 roles identified by R. E. Quinn in *Beyond Rational Management*. It is possible to become a better leader, particularly to improve in those area that seem far from your natural style.

1. Complete the information at the end of the form with your name, city, etc. Print legibly!

2. Using the 1 to 7 scale described on the form, please indicate how often you engage in the 32 listed behaviors in your workplace or other settings. (Questions on left side of form.)

3. Under the right section of the form called "Worksheet for Self Assessment", write in your numerical rating (1 to 7) beside the question numbers listed.
After you write in the score (1 to 7) for each of the 4 questions in a category/role, add them up and divide by 4. See the example below.

(left side of form)
Competing Values Leadership Profile
Question #1 ___5___ Comes up...
Question #2 ___5___ Protects continuity...
Question #3 ___4___ Exerts upward influence...

(right side of form)
Worksheet for Self-Assessment
The Facilitator

#6	5
#11	4
#24	6
#31	6
Total	21

Divided by 4 = ___5.25___ **= Facilitator "score"** (to be plotted on wheel entitled "Self-Assessment: Your Own Profile".)

4. Plot the average score for each of the 8 roles on the Self-Assessment Wheel. To complete your profile, draw as straight a line as possible between each of the 8 scores. Connect the scores to make an 8 sided "circle".
Sample "Facilitator" Plot on the Self-Assessment Wheel is below.



Continued on Back

APPENDIX C
APPLICATION TO APPLE PROGRAM

The APPLE Program

Advanced Public Health Nutrition Professional Leadership Education

NOMINATION FORM

Deadline: November 1, 1993

Please type or print.

Nominee _____
Last *First* *Middle*

Nominated by: _____ Self _____ Other *If other, list name, title, and telephone number.* _____

Home Address _____
Street *City* *State* *Zip*

Employer _____ Years of Employment _____

Present Title _____ Years in current position _____

Business Address _____
Street and/or P. O. Box

_____
City *State* *Zip*

Work Phone (_____) _____ Home Phone (_____) _____

NOTE: *Circle* preferred mailing address: **Home** **Work**

How long have you practiced:

in the field of nutrition? _____ years
in the field of public health nutrition? _____ years

Educational background

_____ _____ Degree/Year_____
school *city, state*

_____ Degree/Year_____
school *city, state*

_____ Degree/Year_____
school *city, state*

Other certifications or credentials

Areas of expertise and professional interests

Professional Work Experience
Include dates, titles, and employers (or attach a current resume with the information.)

Professional Associations and Related Affiliations

Organization/Activity	Dates	Offices Held / Dates

Community Organizations / Involvement

Organization/Activity	Dates	Offices Held / Dates

Awards, Honors, or Special Recognition

I understand that the purpose of The APPLE Program is to develop my leadership skills. I agree to devote the time required to prepare and participate in all three teleconferences and to apply the skills learned in my work setting.

Applicant's signature: _____

Supervisor's signature: _____
(Required if employed by Federal, State, or Local health agency.)

The completed application must be returned no later than NOV. 1, 1993 to:

Janice L. Kidd, PhD, RD
The APPLE Program Coordinator
The University of Tennessee
Public Health Nutrition Program
P. O. Box 11243
Knoxville, TN 37939-1243

Questions?
Call Janice Kidd at (615) 584-3438 *OR* Paula Zemel at (615) 974-5445.

APPENDIX D
LIST OF ABBREVIATIONS

LIST OF ABBREVIATIONS

1. MBTI	Myers-Briggs Type Indicator
2. CVLP	Competing Values Leadership Profile
3. APPLE	Advanced Public Health Nutritionist Professional Leadership Education program
4. IPAR	Institute of Personality Assessment and Research
5. USPHS	United States Public Health Service
6. CAPT	Center for Applied Psychological Type
7. ANOVA	Analysis of Variance

The following are personality types from the MBTI

Each personality type is a part of a dichotomy E vs. I, S vs. N, T vs. F. and J vs. P.

1. E	Extrovert (energized by verbalizing thoughts and ideas)
2. I	Introvert (energized by thoughts and ideas)
3. S	Sensor (gathers information using six senses)
4. N	iNtuitive (looks for possibilities, meanings, & relationships)
5. T	Thinker (makes judgements objectively)
6. F	Feeler (makes judgements subjectively)
7. J	Judger (is decisive, prefers planning and control)
8. P	Perceiver (is spontaneous, flexible and adaptable)

APPENDIX E
ADA DIETETIC INTERNSHIP GUIDELINES

COMPETENCY STATEMENTS FOR THE SUPERVISED PRACTICE COMPONENT OF ENTRY-LEVEL DIETITIAN EDUCATION PROGRAMS

Competency statements specify what every dietitian should be able to do at the beginning of his or her practice career. The core competency statements build on appropriate knowledge and skills necessary for the entry-level practitioner to perform reliably at the verb level indicated. One or more of the emphasis areas should be added to the core competencies so that a supervised practice program can prepare graduates for identified market needs. Thus, all entry-level dietitians will have the core competencies and additional competencies according to the emphasis area(s) completed.

The minimum performance level for the competency is indicated by the action verb used at the beginning of the statement. The action verbs reflect four levels of performance. The higher level of performance assumes the ability to perform at the lower level:

1. *assist* - independent performance under supervision or
   participate - take part in team activities;
2. *perform* - able to initiate activities without direct supervision or
   conduct - activities performed independently;
3. *consult* - able to perform specialized functions that are discrete delegated activities intended to improve the work of others or
   supervise - able to oversee daily operation of a unit including personnel, resource utilization and environmental issues; or coordinate and direct the activities of a team or project workgroup;
4. *manage* - able to plan, organize, and direct an organization unit through actual or simulated experiences including knowing what questions to ask.

If the verb "manage" is used, it assumes that the student will progress from "supervise" or "perform/do" the activity while in the program. (Note: the perform level is indicated in parenthesis at the end of the statements to which it applies.) Students may demonstrate that they can manage or supervise through such activities as quality improvement audits, systems review, or directing an activity coordinating others.

CORE COMPETENCIES FOR DIETITIANS (CD)

Upon completion of the supervised practice component of dietitian education, all graduates will be able to do the following:

CD1. Perform ethically in accordance with the values of The American Dietetic Association

CD2. Refer clients/patients to other dietetics professionals or disciplines when a situation is beyond one's level or area of competence (perform)

CD3. Participate in professional activities

CD4. Perform self assessment and participate in professional development

CD5. Participate in legislative and public policy processes as they affect food, food security, and nutrition

CD6. Use current technologies for information and communication activities (perform)

CD7. Supervise documentation of nutrition assessment and interventions

CD8. Provide dietetics education in supervised practice settings (perform)

CD32. Assess nutrition 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

CD33. Manage the normal nutrition needs of individuals across the lifespan, ie, infants through geriatrics and a diversity of people, cultures, and religions

CD34. Design and implement nutrition care plans as indicated by the patient's/client's health status (perform)

CD35. Manage monitoring of patients'/clients' food and/or nutrient intake

CD36. Select, implement, and evaluate standard enteral and parenteral nutrition regimens (perform), ie, in a medically stable patient to meet nutritional requirements where recommendations/adjustments involve primarily macronutrients

CD37. Develop and implement transitional feeding plans (perform), ie, conversion from one form of nutritional support to another, eg, total parenteral nutrition to tube feeding to oral diet.

CD38. Coordinate and modify nutrition care activities among care givers (perform)

CD39. Conduct nutrition care component of interdisciplinary team conferences to discuss patient/client treatment and discharge planning

CD40. Refer patients/clients to appropriate community services for general health, nutrition needs and to other primary care providers as appropriate (perform)

CD41. Conduct general health assessment, eg blood pressure, vital signs (perform)

CD42. Supervise screening of the nutrition status of the population and/or community groups

CD43. Conduct assessment of the nutrition status of the population and/or community groups

CD44. Provide nutrition care for population groups across the lifespan (perform), ie, infants through geriatrics and a diversity of people, cultures, and religions

CD45. Conduct community based health promotion/disease prevention programs

CD46. Participate in community based food and nutrition program development and evaluation

CD47. Supervise community based food and nutrition programs

COMPETENCY STATEMENTS FOR ENTRY-LEVEL DIETITIAN EDUCATION PROGRAMS EMPHASIS AREAS

In addition to the core competencies, the program must offer at least one emphasis area. The program has the following options:

- Use one or more of the four defined emphasis areas
- Develop a general emphasis by selecting a minimum of seven competency statements, relevant to program mission and goals, from the four defined emphasis areas.
- Create an unique emphasis area with a minimum of seven competency statements, based on environmental resources and identified needs

Four emphasis areas and corresponding competencies for each emphasis are identified below.

NUTRITION THERAPY EMPHASIS COMPETENCIES (NT)

NT1. 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
NT2. Integrate pathophysiology into medical nutrition therapy recommendations (perform)
NT3. Supervise design through evaluation of nutrition care plan for patients/clients with complex medical conditions, ie, more complicated health conditions in select populations, eg, renal disease, multi-system organ failure, trauma
NT4. Select, monitor, and evaluate complex enteral and parenteral nutrition regimens (perform), ie, more complicated health conditions in select populations, eg, renal disease, multi-system organ failure, trauma
NT5. Supervise development and implementation of transition feeding plans from the inpatient to home setting
NT6. Conduct counseling and education for patients/clients with complex needs, ie, more complicated health conditions in select populations, eg, renal disease, multi-system organ failure, trauma
NT7. Perform basic physical assessment
NT8. Participate in nasoenteric feeding tube placement and care
NT9. Participate in waivered point of care testing, such as blood glucose monitoring
NT10. Participate in the care of patients/clients requiring adaptive feeding devices
NT11. Manage clinical nutrition services

COMMUNITY EMPHASIS COMPETENCIES (CO)

CO1. Manage nutrition care for population groups across the life span
CO2. Conduct community based food and nutrition program outcome assessment/evaluation
CO3. Develop community based food and nutrition programs (perform)
CO4. Participate in nutrition surveillance and monitoring of communities
CO5. Participate in community based research
CO6. Participate in food and nutrition policy development and evaluation based on community needs and resources
CO7. Consult with organizations regarding food access for target populations
CO8. Develop a health promotion/disease prevention intervention project (perform)
CO9. Participate in waivered point of care testing, such as hematocrit and cholesterol levels

These Competency Statements for the Supervised Practice of Entry-level

Dietitian Education Programs were taken from:

Commission on Accreditation/Approval for Dietetic Education Standards of Education. *Accreditation/Approval Manual for Dietetic Education: Program*. Chicago, IL, 1997.

APPENDIX F
AGE

Table A-1

Number and percent of dietetic professionals who included and omitted age on their data forms. [a]

Age	Frequency	%
Included	238	69.5
Omitted	115	30.5

[a] n=353

VITA

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