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Personality Characteristics and Job Satisfaction of Registered Dietitian Nutritionists in North
Carolina

Paul Barton Moore

North Carolina A&T State University

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department: Leadership Studies and Adult Education

Major: Leadership Studies

Major Professor: Dr. Karen T. Jackson

Greensboro, North Carolina

2019

The Graduate College
North Carolina Agricultural and Technical State University

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Paul Barton Moore was born on October 7, 1977 to Mr. Richard Cecil Moore and Mrs. Linda Otto Moore in Fort Belvoir, Virginia. Paul holds a Bachelor of Science degree in Exercise Science from Appalachian State University and completed his dietetic internship at Winthrop University. He also holds a Master of Science degree in University of Alabama at Tuscaloosa and a Master of Business Administration from Georgia Southern University. Paul is currently a faculty member in the College of Health Sciences Department of Nutrition and Healthcare Management at Appalachian State University in Boone, NC. Paul holds certification as a Board Certified Specialist in Sports Dietetics (CSSD) through the Commission on Dietetic Registration in addition to being certified through the National Strength and Conditioning Association (NSCA) as a Certified Strength and Conditioning Specialist (CSCS) and NSCA Certified Personal Trainer (NSCA-CPT). He has performed extensive volunteer work with the Academy of Nutrition and Dietetics Weight Management Practice Group (WM DPG), as well as the North Carolina Dietetic Association (NCDA). Paul was honored as the recipient of the 2015 Excellence in Weight Management Practice award given by the WM DPG. He was also recognized in 2014 by Today's Dietitian Magazine as one of the Top 10 RDs making a difference in the lives of his clients and community. The NCDA recognized Paul with the 2011-2012 Outstanding Dietitian of Year award, the highest award given by the organization, and the 2012-2013 Young Dietitian of the Year.

Paul is married to Meredith Hicks Moore and they have three children, Kennedy Kathryn, Kate James, and Charlotte Ellis.

Dedication

I dedicate this dissertation to my wife (Meredith) and my children (Kennedy, Kate James, and Charlotte) who have supported me tirelessly and lovingly throughout this process. To my mother, Linda, who showed me through her hard work in raising my sister and I, that anything is possible and to never quit and never give up. Thank you mom for serving as an inspiration. To my father Richard, who believed in me and was proud of everything I ever did and accomplished in life. To my sister who showed me the importance of education and lead the way and served as a role model in our educational endeavors.

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Abstract

Organizational leadership, at any level, strives to increase performance and efficiency, among other outcomes. One way to accomplish this is by increasing follower job satisfaction. Literature indicates that there are intrinsic and extrinsic factors that influence job satisfaction. These factors, however, have not been explicitly studied for the profession of nutrition and dietetics for the Registered Dietitian Nutritionist (RDN). The purpose of this study was to examine the relationship of personality characteristics and job satisfaction of Registered Dietitian Nutritionists in North Carolina. Personality characteristics were defined by the Big 5 Inventory personality test, while job satisfaction and its components were collected through the Spector Job Satisfaction Survey (JSS). Areas of practice for RDNs included clinical, community, food and nutrition management, education and research, and consulting, business and private practice. Personal and professional characteristics were collected to obtain background information about education level, years of experience, years in current setting, and other demographic information. Survey data were collected from 380 RDNs in North Carolina. Results showed that agreeableness was positively correlated with overall job satisfaction for RDNs, while neuroticism was negatively correlated. The r^2 indicates that 15.4% of the variance was explained by the Big 5 personality characteristics of agreeableness and neuroticism. Based on practice area, clinical RDNs have significantly lower job satisfaction when compared to consultation, business, and private practice RDNs. Driving factors of job satisfaction for the practice areas were identified, with the exception of education and research. In the clinical practice area, neuroticism was shown to have a negative correlation with overall job satisfaction, while agreeableness was found to be positively correlated with overall job satisfaction. In the community practice area, agreeableness was shown to be positively correlated with overall job

satisfaction. Likewise, agreeableness was shown to be positively correlated to overall job satisfaction for the food and nutrition management practice area. In the practice area of consultation, business, and private practice, neuroticism was demonstrated to have a negative correlation to overall job satisfaction. Examination of personality characteristics in the practice areas were also conducted without factoring in job satisfaction. Future research should explore other relationships that may exist with job satisfaction in the field of nutrition and dietetics. Expansion of this study to a national sample and other professions is also recommended.

CHAPTER 1

Introduction

Organizational leadership, at any level and structure of an institution should strive to improve performance dimensions and accomplish key outcomes to ensure success. Among these dimensions and outcomes, leaders should provide and articulate a clear vision, develop competence, and increase performance and efficiency of the organization (Schneider, & Jones, 2017). A clear vision provides a goal for the organization to strive toward for the future. Developing competence has positive implications for both the leader and followers of the organization. Developing and maintaining competence is essential to a leader's decision-making proficiency, as well as a leader's adaptability. Several competency models have been identified in the literature as essential to individuals in a leadership position to improve organizational performance (Kim & McLean, 2015; Redick, Reyna, Schaffer, & Toomey, 2014; Schneider & Jones, 2017).

One way to increase organizational performance and efficiency is to increase follower (employee) job satisfaction (Altuntaş, 2014; Judge, Thoresen, Bono, & Patton, 2001; Octaviannand, Pandjaitan, & Kuswanto, 2017). Increasing job satisfaction can lead to increased career satisfaction (Royle, 2016), increased organizational commitment (Agarwal & Sajid, 2017), increased job performance, decreased employee turnover, and increased organizational citizenship behavior (Ziegler, Schlett, Casel, & Diehl, 2012). The research literature indicates that there are intrinsic and extrinsic factors that influence job satisfaction (Maidani, 1991). Extrinsic factors of job satisfaction may include pay, nature of work, supervision, fringe benefits, communication and coworkers (Spector, 1997). Traditionally, Herzberg has looked at intrinsic factors to the job itself as things such as recognition, achievement, and personal growth

(Hackman & Oldham, 1976), but more recent literature notes that these motivating, intrinsic factors of job satisfaction are components less associated with outside influences such as the environment and more associated with internal elements such as one's personality (Prabhu, Sutton, & Sauser, 2008; Tanaka, Mizuno, Fukuda, Tajima, & Watanabe, 2009).

These internal factors have been studied in several occupations (Eason, Mazerolle, Monsma, & Mensch, 2015; Foulkrod, Field, & Brown, 2010) but have not been explicitly studied for the profession of the nutrition and dietetics. The professional credential and association affiliated with the profession is the Registered Dietitian Nutritionist (RDN) and the Academy of Nutrition and Dietetics (AND), respectively. The Academy of Nutrition and Dietetics was founded a little over 100 years ago and has approximately 100,000 credentialed practitioners nationally ("About Us," n.d.). As a relatively young and constantly evolving profession and organization, AND has formed a Council on Future Practice (CFP) which has published its 2017 Visioning Report: A Preferred Path Forward for the Nutrition and Dietetics Profession (Kicklighter et al., 2017). The visioning report serves to identify the future needs and changes that are a priority for the profession to ensure its long-term success and relevance to society. Several of the identified areas of the visioning report relate directly to the conceptualization and operationalization of leadership in the profession and include job supply and demand for RDNs, retention of RDNs in the workforce, RDN career development (competence), RDN career advancement and other facets of leadership, such as reward, recognition, motivation, drive, and mentoring new practitioners (Kicklighter et al., 2017).

1.1 Statement of Problem

Leadership, across all professions and organizations, should aspire to increase job satisfaction among its following because in doing so the promotion of job performance,

organizational efficiency and other prominent outcomes can be realized (Schneider & Jones, 2017). According to Herzberg's Two Factor Theory of Job Satisfaction, intrinsic and extrinsic factors have been identified that influence job satisfaction and thus the overall performance of the organization. The wellness of the employees or followers of an organization may also be influenced by these factors. These factors, however, have not been explicitly studied in the field of nutrition and dietetics, even though the professional organization has created a council on future practice which periodically releases a visioning report to identify the needs and changes in the profession and strategizes a plan to secure the fields' relevance to society for now and for the future (Kicklighter et al., 2017). Many items noted as important to the future of the profession directly relate to leadership and thus need to be studied in an evidence-based manner to provide scientific and practical information that add to and create new research that could be used in a leadership framework for the continued evolution of the profession.

In recent years, a proliferation of research has expanded the knowledge base undergirding nutrition science (Mozaffarian, Rosenberg, & Uauy, 2018). However, research is lacking within the dietetics profession in the areas of leadership, management, and career pathways and retention for dietetics practitioners. This information is vital to ascertain based on three key identified challenges and opportunities with the profession in relationship to the general population. These three key challenges are the projected supply and demand for the profession (Rhea & Bettles, 2012), the lack of diversity in the profession compared to the increase in cultural diversity in the general population (Nyland & Lafferty, 2012) and the profession's emphasis in only one of the five work areas. There is currently a practitioner heavy workforce in the clinical setting that is still projected to have an employment shortfall in that specific area, in addition to the decreased supply and increased demand for the profession. With healthcare's and

the population's emphasis on wellness and preventative care, more opportunities may exist outside of the clinical area for current and future RDNs ("Dietitians and Nutritionists" n.d.; Kicklighter et al., 2017). This emphasis in the clinical area may reduce prospective RDNs from seeking work in one of the other four main areas (Hooker, Williams, Papneja, Sen, & Hogan, 2012; Nyland & Lafferty, 2012).

The goal of this research was to expand the evidence base supporting best practices for achieving career satisfaction within the dietetics profession, thus retaining the contributions of experienced nutrition professionals over the course of their careers. This research may also provide information for future practitioners in the area of the field that contribute to job satisfaction. Increasing job satisfaction early in the practitioner's career may lead to increased career satisfaction (Upadyaya & Salmela-Aro, 2015), decreased attrition rates, and decreased employee turnover (Mazerolle et al., 2018).

Currently, there are few studies assessing or measuring the personality characteristics and job satisfaction of Registered Dietitian Nutritionists. Poster sessions have been developed with respect to job satisfaction of RDNs in South Carolina, Texas and graduates of a university, but research has not been formally developed into a peer reviewed journal article (Burkholder & Lavelle, 1995; Pless, Wolman, Stallings, & Goodner, 1998; Smith, Bush, Wright, & Watson, 1994). Likewise, a poster session was developed related to job satisfaction and specialty certification (Talenfeld & Enrione, 2015). Some dissertations have addressed career or job satisfaction and personality; however, these dissertations were completed prior to 2004 (Dishion, 2004; Eick, 1989; Fellers, 1974; Monagan, 1981).

RDN practitioners work in multiple areas, but are divided into the five main areas of clinical, community, food and nutrition management, education and research, and consultation,

business and private practice (Academy of Nutrition and Dietetics, 2017). Analysis of these five areas may help better predict which area an individual is likely to pursue based on their personality characteristics. Analysis may also help future professionals, students, or those looking for a change of career to or within this profession to be better equipped to practice in any of these five areas of nutrition and dietetics. Additionally, job satisfaction within the field as a whole may be better analyzed, examined, and understood.






1.2 Conceptual Framework

The Herzberg two-factor theory of job satisfaction states that there are extrinsic and intrinsic sources that moderate and predict job satisfaction. Herzberg identified these two factors as motivators, arising from intrinsic factors such as recognition, achievement and personal growth and hygiene factors that are extrinsic to the job and include salary, benefits, and coworkers. The intrinsic factors of job satisfaction are founded in motivation and motivational forces (Herzberg, 1968; Herzberg, Mausner, & Snyderman, 1959). Several researchers note that one's personality is a key indicator of motivation (Herzberg, 1968; Herzberg et al., 1959). Therefore, this research will look at personality characteristics, as tied to motivation, as an intrinsic factor.

1.2.1 Extrinsic sources. These factors are identified as supervision, working conditions, co-workers, pay, policies and procedures, status, personal life and job security and can be measured (Herzberg, 1968; Herzberg et al., 1959). These sources can be measured with the Spector Job Satisfaction Survey (JSS) which uses a summated rating scale combining pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication (Spector, 1985, 1997).

1.2.2 Intrinsic sources. These factors are achievement, recognition, the work itself, responsibility, advancement and growth, as originally identified by Herzberg. These are all based on motivation and motivational factors, which some researchers have linked to personality characteristics (Judge & Ilies, 2002; Penney, David, & Witt, 2011)

1.2.3 Big 5 personality characteristics. The Big 5 personality characteristics measure five major facets of an individual's personality. These five areas are scored on a continuum as seen in figure 1.1 and are identified as openness, conscientiousness, extraversion, agreeableness and emotional stability (John & Srivastava, 1999).

Figure 1.1 <i>Big 5 Personality Characteristics Continuum</i>		
Closed to experience		Open to Experience
Lack of Direction		Conscientiousness
Introversion		Extraversion
Antagonism		Agreeableness
Neuroticism		Emotional Stability
<i>Note.</i> Adapted from “The big five trait taxonomy: History, measurement, and theoretical perspectives”, by John and Srivasta, 1999, In L.A. Pervin & O.P. John (Eds.), <i>Handbook of personality: Theory of research</i> . p. 110.		

1.3 Purpose of Study

The purpose of this study was to examine the relationship of personality characteristics and job satisfaction of Registered Dietitian Nutritionists in North Carolina. Personality characteristics are defined by the Big 5 personality test (also known as the Five Forces Model or

Five Factor Model), and the areas of practice for RDNs include clinical, community, food and nutrition management, education and research, and consulting, business, and private practice. Personal and professional characteristics were collected to obtain background information about education level, years of experience, years in current setting, and other demographic information.

1.4 Research Questions

RQ1: What is the influence of personality characteristics on job satisfaction for the RDN?

RQ2: What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?

RQ3: Is there a relationship between personality characteristics and the practice area of the RDN?

RQ4: Is there a relationship between race, salary, age, or gender and job satisfaction?

1.5 Definitions of Terms

Academy of Nutrition and Dietetics (AND) – the major professional organization for those working in the fields of nutrition and dietetics.

Clinical – References the area of dietetics where a RDN would work. Clinical settings generally include hospitals, long term care facilities, and other acute and long term care facilities, such as a dialysis center.

Clinical Nutrition Manager (CNM) – A Registered Dietitian Nutritionist who supervises and oversees clinical dietitians, who are RDNs, working in an acute care hospital setting.

Community – references an area of dietetics where a RDN would work. Community refers to engagement with people in the area where the professional is working. Community dietitians may work in outpatient settings such as diabetes, weight management, bariatric or

wellness centers. Health departments and agencies such as WIC (Women Infants and Children) are also considered community.

Consultation, business, and private practice– References an area of dietetics where a RDN would work. These professionals create opportunities for a single service or combination of the following: consulting, private practice, social media, speaking or other areas.

Education and research – References and area of dietetics where a RD/RDN would work. These are teaching and/or research positions generally held in universities and colleges.

Extrinsic factors of job satisfaction – Identified by Herzberg as supervision, working conditions, co-workers, pay, policies and procedures, job security, status, and personal life (Herzberg, 1968; Herzberg et al., 1959).

Food and nutrition management – References an area of dietetics where a RDN would work. Foodservice refers to the management, procurement and production of food and nutrition services such as those working in school systems.

Intrinsic factors of job satisfaction – Motivating factors that involve achievement, recognition, advancement, growth, and the work itself. These are focused on motivation (Herzberg, 1968; Herzberg et al., 1959).

North Carolina Academy of Nutrition and Dietetics (NCAND) – The professional organization for food and nutrition professionals in the state of North Carolina.

North Carolina Board of Dietetics/Nutrition (NCBDN) – The licensing and regulatory oversight board for the profession of nutrition and dietetics in the state of North Carolina.

Registered Dietitian (RD) – the national credential for the field of nutrition and dietetics, RD is the older abbreviation and has now been modified to RDN, however, both are acceptable to use as indicated by the credentialing body for the profession.

Registered Dietitian Nutritionist (RDN) – Current terminology for the Registered Dietitian professional in the field.

1.6 Delimitations of the Study

Leedy and Ormrod, 2016, note that the delimitations of a study should be stated to describe what the researcher is not planning to study and why, while the research problem addresses what the researcher is planning to study, as this helps set parameters in the research (Leedy & Ormrod, 2016). This research study was limited to active RDNs in the state of North Carolina and did not include students in dietetic programs or internships, nor retired RDNs. The researcher utilized North Carolina because of the convenience sample methodology to gather foundational data for use before expanding to a broader national population. Use of the Academy of Nutrition and Dietetics compensation survey served as a template for the demographic section of this survey due to its familiarity with the sample population of RDNs. RDNs are familiar with the language, terminology, and possible answer choices due to participation in these national level surveys, thus this format was utilized to increase efficiency of survey response and time to completion.

The researcher used the Spector Job Satisfaction Survey, however, the statistical analysis for this research was limited to the use of overall job satisfaction scores. Statistical analysis did not account for or examine the components that are used to construct the overall job satisfaction scores. Future research may be conducted to further examine these possible relationships to investigate sources of satisfaction or dissatisfaction of one's job.

1.7 Limitations of the Study

Limitations to this research included the following: self reported data, results that are not generalizable to the entire profession, potential for multiple responses from the same individual,

the intended use of this information, demographic information requested at the beginning of the survey, and the possibility of an increase in experimentwise error due to the increased number of significance tests utilized. Due to the survey nature of this research, the participant self-selected answers to questions on all parts of the survey. Results that were obtained are not generalizable to the field of nutrition and dietetics due to the sample being obtained from RDNs in the state of North Carolina. Additional research should be considered to obtain data from a national population to increase generalizability of results. The intended use of this research was to determine patterns that may identify job satisfaction levels and optimal practice area placement for RDNs. The intended use of this research is not to create stereotypes for hiring organizations, RDNs, or others that may utilize information and results from this study. Demographic information requests made at the beginning of surveys may influence subsequent participant answers and threaten their anonymity, and therefore consideration should be made to put them at the end of the survey. An increase in the possibility for an experiment wise error exists due to the increased number of significance test that were utilized in this research. Research question three, for example, uses five ANOVAs for analysis.

1.8 Significance of the Study

The significance of this research is to help better identify and understand the relationship between personality characteristics and job satisfaction of the RDN. This information may provide valuable insights into and a first step in dealing with the challenges that the profession faces with supply and demand, diversity, and the changing landscape of healthcare and the general population to a focus on wellness and prevention. Discovering what RDNs “look like” in the five main areas in which they work and furthermore, being able to examine any relationships that exist between personality characteristics, work environment and job

satisfaction, may provide a foundation for maintaining the profession's current and future relevance to society. Additional examination will look at personality characteristics and job satisfaction within various environments of work for the RDN. Implications from this research can help future professionals determine which area of nutrition and dietetics they may be best suited for and have increased levels of job satisfaction with as well as to guide future students as they explore a career as a RDN. Furthermore, it may help individuals interested in the RDN profession to determine which area of nutrition and dietetics they may be better matched for based on their personality characteristics. This information could also be used by academic advisors in higher education to assist students in making decisions about which area of dietetics to go into, especially in students who may be more concerned with career and personal happiness than other factors. In a qualitative study, a participant noted that they "wanna do something that'll bring happiness to me, something I'll enjoy doing because I know I have the skill and the personality" (Carduner, Padak, & Reynolds, 2011).

1.9 Significance of the Study for Leadership

Leaders in this field and profession will be able to utilize the information from this research and incorporate it into a model for hiring and professional development that will increase organizational and operational efficiencies and improved outcomes. Leadership, that includes the CFP and professional association in this area, will be provided with key foundational data that will serve to grow the profession and give a basis for its relevance to society now and for the future.

The overall field of leadership will gain knowledge in an area of the health sciences that has not been studied specifically in these terms. Additionally, confirmation may be provided to the Herzberg Model of Job Satisfaction that is specific to this area.

1.10 Organization of the Study

This research dissertation is divided into five chapters. Chapter 1 introduces the research area of interest and states the research problem and questions, defines the key terms associated with the research, provides the delimitations of the study, as well as the significance of the study. Chapter 2 provides a review of the relevant literature and includes an in-depth look at personality characteristics that have been defined in the field of nutrition and dietetics, as well as job satisfaction in the field. Chapter 2 reviews literature associated with personality characteristics and job satisfaction outside of the field of nutrition and dietetics. Chapter 3 consists of the research design and methodology. The fourth chapter states the results of the quantitative research and presents the findings, while chapter 5 discuss the results, recommendations, and implications for future research and how this applies to the Registered Dietitian Nutritionist practitioner and those who aspire to be a RDN.

CHAPTER 2

Literature Review

The literature review includes three main areas: 1) a discussion of job satisfaction and related studies, including job satisfaction in healthcare, 2) personality characteristics that includes the Big 5 and 3) a discussion and review of the literature that involves the role of personality characteristics on job satisfaction. The overall goal of this study was to examine the relationship of personality characteristics on job satisfaction of Registered Dietitian Nutritionists in North Carolina.

Based on the information compiled from the visioning report and job supply and demand data from the profession, three major challenges can be used to explain the importance of the need to better understand job satisfaction within the field of nutrition and dietetics. These three key challenges identified were the projected supply and demand for the profession (Rhea & Bettles, 2012), the lack of diversity in the profession compared to the increase in cultural diversity in the general population (Nyland & Lafferty, 2012) and the profession's emphasis in only one of the five major practice areas (Hooker et al., 2012). There is currently a clinical practitioner heavy workforce that is projected to have an employment shortfall coupled with healthcare's and the population's emphasis on wellness and preventative care (Hooker et al., 2012; Nyland & Lafferty, 2012). Workforce supply and demand scans and the implications they may have on the dietetics workforce reveal that, in the period leading up to the year 2020, the field of dietetics will suffer an attrition rate of 2-5% (Hooker et al., 2012; Nyland & Lafferty, 2012). Attrition in the field is based on several factors that include emigration, extended leave, retirement, death and disability (Rhea & Bettles, 2012). In contrast, the bureau of labor statistics projects the percent change for dietitians and nutritionists from 2016-2026 to increase by 15%,

which is identified as much faster than the average 7% growth rate for all occupations (“Dietitians and Nutritionists,” n.d.).

The second challenge for the profession is that while cultural diversity is on the rise (“Projections of the Size and Composition of the U.S. Population: 2014 to 2060,” 2014), the profession has not kept pace, leaving a gap between the practitioner and the population. This gap and lack of diversity may negatively impact the quality of care and thus should be closed or minimized (Rhea & Bettles, 2012). According to the Commission on Dietetic Registration’s Registry Statistics website, accessed on May 30, 2018, nationally, there are 100,024 Registered Dietitians/Registered Dietitian Nutritionists with 89.12% being female, and 76.25% of total practitioners being white (“Registry Statistics - Commission on Dietetic Registration,” n.d.). The percentage of those who are male, African American, Asian or Hispanic in the field has remained basically unchanged (Gaba, Shrivastava, Amadi, & Joshi, 2016). In contrast, approximately 50% of the United States population is expected to be in a minority group by 2044 (“Projections of the Size and Composition of the U.S. Population: 2014 to 2060,” 2014).

The last challenge the profession faces is a heavy practitioner emphasis in the clinical setting and an expected shortfall in clinical practitioners coupled with the current trends in healthcare and with the general population’s emphasis on wellness and preventative care (Hooker et al., 2012; Nyland & Lafferty, 2012). While there is a trend toward wellness and prevention, there is also expected to be a full-time employment shortfall in clinical areas of approximately 12,000 jobs by 2020, due to the aging population and growth in long term care facilities (Hooker et al., 2012).

2.1 Job Satisfaction

Spector (1997) defines job satisfaction as the degree to which an individual likes his or her job (Spector, 1997). Job satisfaction is composed of two primary components, an affective component, which relates the feeling of satisfaction experienced by an individual from his or her job and a perceptual component, which defines how well the job meets the personal needs of the individual. Job satisfaction has been demonstrated to be a vital and main predictor of an individual's intention to leave or stay at a job or organization (Coomber & Barriball, 2007; Mobley, Horner, & Hollingsworth, 1978).

Coomber and Barriball (2007) examined the impact of job satisfaction on employee turnover and attrition rates in nurses in the United Kingdom due to a shortage of nurses in that country combined with low retention rates. Through a review of qualitative data, they found that stress at work and leadership issues were sources of dissatisfaction for nurses and thus contributed to the high turnover rates. Two variables, education and pay, were found to contribute to job satisfaction. The authors concluded that job satisfaction is a main indicator of attrition and that research should be further used to investigate additional ways of increasing job satisfaction in an effort to increase retention rates and decrease the nursing shortage (Coomber & Barriball, 2007).

Mobley, Horner, and Hollingsworth (1978) examined employee turnover of 203 hospital employees. This research included a questionnaire analyzing both general and specific elements of job satisfaction. Intention to quit, thoughts about quitting, and probability of finding another job were also examined. Hospital employee turnover data were collected 47 weeks after administration of the questionnaire. Results indicated that job satisfaction was not correlated with actual turnover rates but was correlated with intention to search for a new job and thoughts

of quitting. This showed that dissatisfaction with an individual's job may contribute to a less than ideal employee attitude and morale, though the time period of this study may have been a limiting factor to actually demonstrate an impact on turnover data (Mobley et al., 1978).

This research, furthermore, demonstrates that individuals who have higher job satisfaction are less likely to leave a job or organization than those who have lower levels of job satisfaction (Mobley et al., 1978). This was also confirmed in a meta-analysis from Cotton and Tuttle, 1986, as well as a review of federal, state, and local public health practitioners (Cotton & Tuttle, 1986; Leider, Harper, Shon, Sellers, & Castrucci, 2016).

In their meta-analysis, Cotton and Tuttle, 1986, reviewed 120 sets of data related to employee turnover and included only published quantitative studies. Components of turnover were divided into the following three categories: external correlates, such as union presence and unemployment rates; work related correlates that included overall job satisfaction and the subheadings of job satisfaction; and personal correlates, such as age, tenure, gender and other demographic information. In the work related category, overall job satisfaction, satisfaction with work itself, pay, satisfaction with the supervisor and organizational commitment were shown to be highly significant (Cotton & Tuttle, 1986).

Leider et al. (2016) explored markers of job satisfaction and intent to leave an organization in federal, state, and local public health practitioners found in two public health workforce surveys. Indicators of job satisfaction were pay, organizational support and employee involvement, with pay being a primary indicator of job dissatisfaction. The researchers concluded that additional research should be done to better understand job satisfaction and the underlying elements to reduce the expected turnover in the public health field in the future so that recruitment and retention of high quality workers is better (Leider et al., 2016).

These two studies by Cotton and Tuttle (1986) and Leider et al. (2016) illustrate the need to better understand job satisfaction for organization employees and practitioners due to the impact it may have on intention to quit, intention to find another job, retention, and recruitment (Cotton & Tuttle, 1986; Leider et al., 2016). While these studies identified some factors contributing to job satisfaction and/or dissatisfaction, other studies have added to the knowledge of job satisfaction for particular employee sectors and job settings.

Many factors have been identified that affect job satisfaction in both health-related (Altuntaş, 2014; Andrioti et al., 2017; Lu, Barriball, Zhang, & While, 2012) and non-health related fields (Jones, Hohenshil, & Burge, 2009; Yang, Brown, & Moon, 2011). Altuntas, 2014, investigated factors affecting job satisfaction intentions to quit in academic nurses. Ten nursing schools providing postgraduate and doctoral education participated in this research with 248 nurses participating. These academic nurses completed a demographic information form in addition to a job satisfaction scale. Research questions included the following: 1) what are the job satisfaction levels of academic nurses, 2) does the job satisfaction level of academic nurses differ by personal and professional characteristics, 3) do academic nurses have any intention of quitting their jobs and 4) what are the reasons causing academic nurses to consider quitting their jobs? Job satisfaction was reported by dimensions of managerial environment, leadership, colleagues, quality of work, work environment, pay, coursework, job security, freedom and administrative tasks and based on position title and academic experience. Analyzing job satisfaction by position title, professors had higher scores in managerial environment, leadership, colleagues, quality of work, work environment and pay, in contrast to research assistants and assistant professors who had the highest levels of job dissatisfaction.

Academic nurses, with 16 years or more of academic experience, had higher scores in managerial environment, colleagues, quality of work, administration and coursework, compared to those with 11-15 years of experience who had higher scores in the working environment, job security and freedom. Nurses with 0-5 years of academic experience possessed higher scores for leadership and pay. Overall, factors that were shown to impact job satisfaction were job title, academic experience, staff status and education levels, with the highest levels of satisfaction occurring in the colleagues and quality of work dimensions and lowest levels of job satisfaction shown in the dimensions of coursework and pay (Altuntaş, 2014).

In 2017, Andrioti et al., reported on job satisfaction of nurses in a variety of clinical positions. The clinical areas of mental health, drug addictions and general nursing were investigated in 144 nurses. Nurses completed a survey that included demographic, professional and personal variables of job satisfaction in four dimensions. In addition to overall job satisfaction, dimensions measured included self-growth and responsibility, interaction and recognition, leadership style and organizational policies, and remuneration and nature of work. While overall levels of job satisfaction were low to moderate, the primary source of satisfaction was the dimension of self-growth and responsibility, and the dimensions of interaction and recognition, leadership style and organizational policies and remuneration and nature of work were identified as the primary sources for job dissatisfaction. The authors of this study concluded that administration and leadership in nursing or health care organizations should implement changes to increase overall job satisfaction and decrease job dissatisfaction to recruit and retain the best possible nurses and those nurses that will provide the best care and quality of services (Andrioti et al., 2017).

Similarly, Lu et al. (2011) reinforced the nursing shortage and high turnover rates as a global issue. With job satisfaction being noted as a key factor in recruitment and retention, the authors of this study sought to further define the elements and factors related to job satisfaction by reviewing 100 published papers on the subject matter. This review supports many of the sources of job satisfaction as described by Spector and his job satisfaction survey (Spector, 1985). Included in the authors' sources of job satisfaction were working conditions, interaction, relationships with patients, relationships with co-workers, management, the work itself, remuneration, psychological rewards, control and responsibility, job security and leadership styles and organizational policies. Another interesting note from this review was that job satisfaction was related to self-esteem, as a moderating or mediating variable. One of the author conclusions was to further examine these moderating or mediating variables such as self-esteem, emotional intelligence, and others to further explore the possible relationships to job satisfaction (Lu et al., 2012).

In a review of studies that investigated job satisfaction and determinants in other settings, corrections officers (Yang et al., 2011) and mental health counselors (Jones et al., 2009) have been studied. Yang et al., 2011, surveyed 400 corrections officers using the Job Descriptive Index (JDI) to measure five factors of job satisfaction. These five factors were pay, promotion opportunities, the job itself, the supervisor, and coworkers. The purpose of this study was to determine the impact of the independent variables on overall job satisfaction. The authors noted that understanding job satisfaction is important from both a humanitarian perspective, as well as a utilitarian perspective, because of its role in positive impacts on turnover, organizational commitment, organizational citizenship behavior and organizational performance. A regression model used to analyze the five factors. Pay, promotion and coworkers were significantly related

with job satisfaction at the 0.01 level. The job itself was significantly related at the 0.05 level, while the supervisor was significantly related at the .10 level. Thus this demonstrated the importance of all five factors. The authors of this study concluded that the corrections officers who had better pay, opportunities for promotion, a challenging job and had positive relationships with both their supervisors and coworkers had higher levels of job satisfaction (Yang et al., 2011).

Mental health counselors in a study by Jones et al. (2009) studied 182 African American counselors from a nationwide sample to investigate job satisfaction and its determinants among African American counselors. Job satisfaction was measured using a modified Minnesota Satisfaction Questionnaire (MSQ), while a data information form was used to collect demographic data as well as ask open-ended questions related to their job and job activities, such as plans to leave the profession, plans to leave current job, current job satisfaction and factors impacting job satisfaction. Approximately 87% of respondents were either satisfied or very satisfied with their job. In the open-ended questions, the factor similar to those being measured in the current study, that was related to dissatisfaction with one's job, was opportunity for promotion. Other qualitative factors of job dissatisfaction were racism and sexism (Jones et al., 2009). While these are important factors to explore with job satisfaction, they are beyond the scope of the current research. The authors of this study concluded that those in academic settings should recruit African Americans to the counseling field, due to the overall levels of job satisfaction, but make practical recommendations to management and leadership in the field for changes to continue to increase levels of job satisfaction for more counselors in the future (Jones et al., 2009).

As demonstrated by the above review of literature and Appendix A summary, it is important to better understand both overall job satisfaction as well as the determinants of job satisfaction. It is also important to understand these in terms of their relationships and interactions to specific fields and types of practitioners. Obtaining a better understanding of the overall job satisfaction levels and determinants of those levels will promote retention at higher levels, decrease turnover, and increase organizational performance. This information can also serve to equip individuals pursuing careers in those fields and be used in recruitment efforts for current practitioners or students. In order to understand overall job satisfaction and its determinants, the Spector Job Satisfaction Survey (JSS) can be used. The JSS measures 9 subscales of job satisfaction and includes supervision, pay, contingent rewards, fringe benefits, promotional opportunities, coworkers, nature of work, work conditions, and communication, as well as overall job satisfaction (Spector, 1985). While these factors can be measured, another group of factors should also be analyzed to help better explain job satisfaction. Previous studies indicate that factors such as self-esteem, personality, and emotional intelligence may also impact job satisfaction (Lu et al., 2012; Monagan, 1981). It is therefore important to measure different sets of factors that impact job satisfaction and its determinants.

2.1.1 Job satisfaction of dietitians. There are currently few studies that have assessed or measured the personality characteristics or job satisfaction of Registered Dietitian Nutritionists. Several poster sessions have been developed with respect to job satisfactions of RDNs in particular states (Burkholder & Lavelle, 1995.; Pless et al., 1998; Smith et al., 1994), as well as specialty certification (Talenfeld & Enrione, 2015), but research has not been formally developed into a peer reviewed journal article. Some dissertations have previously attempted to address career or job satisfaction and personality, however, these dissertations were completed prior to

2004 (Dishion, 2004; Eick, 1989; Fellers, 1974; Monagan, 1981). In the earliest of these dissertations, Fellers, 1974, sought to identify personality types of dietitians and examine if a relationship existed to career satisfaction. It was noted that having knowledge of this information could help recruitment efforts to the fields of dietetics. Surveys were mailed to 400 dietitians, and 243 were used based on inclusion criteria. Personality was measured with Myers-Briggs Type Indicator and career and specialty satisfaction were measured with a short questionnaire developed by the researcher that was included in the demographic information questionnaire. There were several results that were noteworthy in relationship to the current study. It was found that there was no typical personality type demonstrated by this group of dietitians, though a general preference for sensing, judging, dealing with the known experiences and being organized emerged. It was also concluded that dietitians have significantly different personality types when compared with other health care related groups and that job satisfaction could not be determined based on their personality type. However, it was found that dietitians who scored higher in levels of extraversion were more likely to be satisfied with their current specialty practice area, compared to those scoring higher in introversion (Fellers, 1974).

Army dietitians working in an army hospital were studied by Monogan (1981) to determine overall job satisfaction and relationships that may exist between motivating factors and selected demographic variables. The author of this study noted the following four important reasons for this research: an increased concern for human assets, the relationship between job satisfaction and job performance, the relationship between dissatisfaction with one's job and increased absenteeism and turnover, and the desire for managers and organizational leaders to know how employees feel about their jobs. Data were gathered from 188 Army dietitians, with 78% being female and 22% males. Job satisfaction was measured using a job

satisfaction/dissatisfaction scale and modified for army dietitians by the researcher. Factors involved with job satisfaction were achievement, advancement, recognition, responsibility, the work, supervision, salary, interpersonal relations, policy and administration and working conditions. Achievement and the work itself had significant relationships with job satisfaction. Advancement was correlated with low levels of satisfaction. Regression analysis indicated that the work itself explained 41% of the variance in job satisfaction, compared to achievement at 10.5% and advancement at 2.4%. The factors of responsibility and recognition were not shown to be significant in explaining the variance (Monagan, 1981). While the author of this study focused on overall job satisfaction and relationship to certain demographic variables, it was noted that differences in personality, motivation and expectation might also serve to explain differences in overall job satisfaction among individuals (Monagan, 1981).

Job satisfaction of Registered Dietitians employed in rural and urban Minnesota were studied by Eick, 1989. Job satisfaction was reported for 254 RDs that were mailed questionnaires that utilized the Minnesota Function and Job Satisfaction Assessment. Several differences were found in demographic information between rural and urban RDs in Minnesota, however, overall job satisfaction with all RDs was high, with no differences existing between rural and urban RDs. Justification or rationale for job satisfaction was not studied, but it was noted that factors that may contribute to job satisfaction should be further investigated, such as reasons for working and job setting (Eick, 1989).

Dishion (2004) investigated overall job satisfaction in a clinical setting of 542 hospital based dietitians in Kentucky, Ohio, and Indiana. Questionnaires were developed by the investigator for the purpose of the study, which included demographic/personal information and rating scales of professionalism, advancement, boss, time, salary, team recognition, benefits, and

coworkers to measure overall job satisfaction using a composite variable. Analysis was run using hierarchical regression and showed that the model of professionalism, team recognition, salary, and advancement explained 65.7% of the variance in overall job satisfaction (Dishion, 2004).

Agriesti-Johnson (1982) in a peer reviewed journal article studied job satisfaction using the Job Descriptive Index, JDI, of dietitians in the United States. Data were collected from 529 dietitians working in multiple practice areas including clinical, community, consultant, generalist, administrative, other, teachers, and research. The purpose of this study was to determine the level of job satisfaction of dietitians among these dietitians. This study found few differences between these categories in terms of job satisfaction, however, it did find that job satisfaction with dietitians was low, compared to norms of the general population (Agriesti-Johnson, & Broski, 1982). It should be noted that the field of nutrition and dietetics has evolved to include an increasing number of practice areas that were not included in this study. In addition, the clinical practice area can be divided between multiple practice areas. While these practice areas are all considered clinical, job satisfaction within each of these practice areas should be further analyzed.

2.1.2 Job satisfaction in healthcare. Currently, while few studies address the job satisfaction of Registered Dietitian Nutritionists, there is research available on job satisfaction in other professions in the field of healthcare (Khamisa, Oldenburg, Peltzer, & Ilic, 2015; Squires et al., 2015).

Khamisa et al. (2015) investigated job satisfaction, in addition to work related stress, burnout, and general health of nurses, and sought to identify relationships between these variables. The study collected information from 1200 nurses from four hospitals who completed

five questionnaires. These five variables were analyzed due to the known impact they have on productivity, performance, and quality of patient care. Job satisfaction scores were gathered using the Spector Job Satisfaction Survey for overall job satisfaction, as well as the nine categories of job satisfaction (pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work and communication). Several associations were found between work related stress and job satisfaction and its components. Significant associations were found between pay and patient care, promotion and patient care, supervision and management issues, fringe benefits and patient care, contingent rewards and staff issues, and coworkers and staff issues, nature of work and patient care, communication and staff issues, operating conditions and patient care. In regard to job satisfaction and general health, satisfaction with the subfields of the Spector Job Satisfaction Survey all had associations in varying degrees to components of general health that included somatic symptoms, anxiety, insomnia, social dysfunction, and depression. The authors of this study concluded that it is important to realize the role and interactions of work related stress, burnout, job satisfaction and general health of nurses because of their implications on patient care, employee turnover, retention, job performance, and absenteeism (Khamisa et al., 2015).

In addition to understanding job satisfaction, it is important to know if job satisfaction differs in similar type jobs that are in different environments or settings. Squires (2015) reviewed job satisfaction among care aides in residential long-term care facilities and then compared results to those in a hospital setting. Factors that were noted to contribute to job satisfaction were viewed in both individual and organizational terms. Of the individual factors, those that were found to be important were empowerment and autonomy, while factors that were not found to be important were age, ethnicity, gender, education level, attending specialized

training, and years of experience. From the organizational factors, facility resources and workload were found to be important, while satisfaction with salary/benefits and job performance were found not to be important. In contrast to long-term care facilities, hospital nurses' job satisfaction had significant relationships with age, years of experience and education level. Additionally, coworkers had a high to moderate relationship in the hospital setting while the long term care relationship of coworkers to job satisfaction was equivocal. In the hospital setting, job satisfaction was related to working conditions, job stress, organizational commitment, role conflict, and organizational and environmental factors. The authors concluded that even for similar jobs, the impact of work environment should be considered in assessing job satisfaction. Investigators also noted that due to these differences, the strategies implemented to improve job satisfaction may be distinctive and specific to various work settings (Squires et al., 2015).

Similar to the profession of dietetics where Registered Dietitian Nutritionists work in multiple clinical settings, including the acute hospital based setting and long term care facilities, this review highlights the importance of going beyond the overall clinical label and conducting further exploration based on setting.

2.2 Personality

The Big 5 personality characteristics, also known as the Five Factor model, is a commonly used model based on personality descriptions. The model looks at five basic traits that include openness to experience, conscientiousness, extraversion, agreeableness and neuroticism, on a scale with opposite ends of the scale representing opposing traits. For example, the extraversion trait will measure on a continuum from a score of 0 (introverted) to 100 (extroverted) in varying degrees. The lower the score, towards 0, the more reserved or

stand-alone an individual may be, compared to a score moving towards 100, indicating a greater likelihood of a person to be outgoing and energetic. The broad dimensions are used to represent an individual's persona, nature and temperament.

2.2.1 Openness to experience. Openness to experience, or openness, indicates to what degree an individual seeks to be unique, both as a person and with events, variety and change and contrasts differences between traditional, matter of fact individuals and those that are more creative or inventive (McCrae & John, 1992). Openness can offer both positive and negative implications on job satisfaction, thus leaving its impact on it vague and unclear (DeNeve & Cooper, 1998).

2.2.2 Conscientiousness. Individuals that score high on conscientiousness may align to a lesser degree with perfectionism and a concern for details, organization and mindfulness, but this individual may also possess standards and set goals that are unattainably too high (McCrae & John, 1992). A positive relationship, however, has been demonstrated between job satisfaction and conscientiousness (DeNeve & Cooper, 1998). This may in part be due to the increased chance of formal and informal rewards being given to the individual, which are viewed as favorable (Connolly & Viswesvaran, 2000).

2.2.3 Extraversion. Individuals scoring higher in extraversion seek out interaction and thrive off these interactions and are seen to inject positive emotions into others (McCrae & John, 1992). It is this presence of positive emotion that is likely to have an impact on job satisfaction in the general workforce (Connolly & Viswesvaran, 2000).

2.2.4 Agreeableness. Individuals that score high in agreeableness are cooperative, collegial and harmonious (McCrae & John, 1992). These individuals seek to obtain relational

familiarity and affection. Achievement of this leads to higher levels of well-being, and in turn higher levels of job satisfaction (Organ & Lingl, 1995).

2.2.5 Neuroticism. Also referred to as emotional instability, neuroticism describes negative and erratic behavior characterized by anger, turbulence, and possibly depression (McCrae & John, 1992). These individuals are sensitive to stress and can be highly reactive, compared to calm, reliable or balanced (McCrae & John, 1992). It is this highly reactive nature and lack of stability that promotes a lack of satisfaction with life as well as with their job (Connolly & Viswesvaran, 2000).

2.3 Big 5 Personality in the United States

Researchers have examined personality characteristics in the United Kingdom (Rentfrow, Jokela, & Lamb, 2015) and in the United States (Rentfrow et al., 2013). This research revealed differences in personality characteristics based on regions or clusters. In the United States, three distinct personality characteristic clusters were identified. The first cluster was identified in the north central Great Plains and in the south and labeled as “friendly and conventional”. This cluster was characterized by moderate to high levels of extraversion, agreeableness and conscientiousness, while having lower neuroticism and very low levels of openness to experience. The second cluster, labeled as “relaxed and creative,” was mainly found in the western United States and in some states on the east coast, including the state of North Carolina. These states were described with an extremely high openness to experience, low agreeableness, extraversion and neuroticism and an average conscientiousness score. The third cluster included states in the New England and Middle Atlantic areas and is characterized with high levels of neuroticism, moderately high openness to experience, moderately low extraversion and

agreeableness and extremely low conscientiousness. This cluster was defined as “temperamental and uninhibited” (Rentfrow et al., 2013).

2.4 Big 5 Personality Characteristics within the fields of Nutrition and Dietetics

Two studies were located that assessed personality profiles of Registered Dietitians (Ball, Eley, Desbrow, Lee, & Ferguson, 2015; Ball, Eley, Desbrow, Lee, & Ferguson, 2016). One of these studies examined the association between dietitians’ personality profile and practice area (Ball et al., 2016), while the other incorporated a cross sectional study design examining the personality traits of dietitians (Ball et al., 2015).

Ball et al. (2015) surveyed 346 Australian dietitians using an online survey methodology to measure temperament and character traits. Temperament traits were used to measure emotional responses to experiences, while character traits were measured the personal values and goals of an individual. Temperament traits are considered to be more stable over the course of one’s lifetime, compared to character traits which are developed over the course of one’s lifetime. Temperament traits include novelty seeking, harm avoidance, reward dependence and persistence, while the character traits are self-directedness, cooperativeness and self-transcendence. Dietitians possessed average levels of novelty seeking and high levels of harm avoidance, reward dependence, persistence, self-directedness and cooperativeness, and low levels of self-transcendence. The authors from this study concluded that dietitians had similar scores to other health professionals but were different than the general population. The authors noted that further research should be conducted to provide insights pertaining to recruitment in the profession of dietetics as well as career counseling strategies for both current and future dietitians (Ball et al., 2015).

Ball et al. (2016) followed up their previous work of temperament and character traits by examining the association between personality profiles and practice areas of the dietitians they had previously studied (Ball et al., 2016). This review of 346 dietitians divided the sample into three “profiles”. Each profile had similar characteristics. Three characteristics were present in each of the three samples. Each of these three profiles demonstrated high levels of self-directedness, high levels of cooperativeness and low levels of transcendence. Of the three profiles, labeled as A, B and C, profile A demonstrated high levels of novelty seeking and was thus twice as likely to have worked in private practice/consultation. Profile B was characterized by high levels of harm avoidance, high levels of self-directedness and high levels of persistence. These dietitians were four times as likely to have worked in the area of foodservice/management. Dietitians in profile C demonstrated high levels of harm avoidance and low levels of self-directedness and were two times less likely to work in private practice/consultation (Ball et al., 2016).

2.5 Similarities and Differences between surveys of Dietitians

In comparing and contrasting the Big 5 Personality Characteristics with the Temperament and Character Inventory, several key observations should be noted. The Big 5 personality measures scores for the characteristics of openness, conscientiousness, extraversion, agreeableness and neuroticism. The Temperament and Character Inventory measures the temperament traits of novelty seeking, harm avoidance, reward dependence and persistence and the character traits of self directedness, cooperativeness, and self-transcendence (Capanna et al., 2012). The Big 5 personality characteristics have been demonstrated to be relatively stable over the course of an individual’s lifetime (Soldz & Vaillant, 1999). Temperament traits have also been demonstrated to stable over one’s life time, while character traits are modified based on an

individual's experiences. Novelty seeking, one of the temperament traits, is shown to negatively correlate to conscientiousness and is positively correlated with openness, both from the Big 5. Reward dependence was found to have a strong positive correlation with agreeableness, while persistence was found to have a strong positive correlation with conscientiousness. Self-directedness was strongly positively correlated to both conscientiousness and emotional stability, which would be characterized by low levels of neuroticism. Cooperativeness had a strong positive correlation with agreeableness. There were no significant correlations found with any of the Big 5 personality characteristics to self-transcendence (Capanna et al., 2012). These results were analyzed from research that examined a group of 900 participants who were given the Temperament and Character Inventory-R (TCI-R) and Big Five Questionnaire (BFQ): Convergence and Divergence to evaluate two competing personality theories and any likeness to each other (Capanna et al., 2012).

2.6 Personality and Job Satisfaction

It has been noted by Judge, et al. (1998), that levels of job satisfaction are related to personality characteristics (Judge, Locke, & Durham, 1998). This is due to the way that personality traits or characteristics of individuals govern or regulate how one elucidates meaning from their environment. People's personalities are influential on how one will process information about themselves and the world around them, thus relating to job satisfaction (Judge et al., 1998). For example, individuals that score high in neuroticism from the Big Five characteristics will most likely have a negative self-esteem and thus have feelings of insecurity, guilt and higher levels of anxiety (Costa & McCrae, 1988). They may also experience higher levels of dependence and helplessness. This combination of factors will make high levels of job satisfaction hard to obtain due to the nature of those feelings and emotions (Judge et al., 1998).

Other research has confirmed that personality characteristics have a relationship with job satisfaction and further noted that there are various personality characteristics that are associated with levels of job satisfaction (Staw & Ross, 1985). Table 2.1 provides an overview of research that presents possible justifications for the links between each of the individual Big 5 characteristics with job satisfaction.

Table 2.1 <i>Justifications for Possible Relationships Between the Big 5 and Job Satisfaction</i>		
Big 5 personality characteristic	Research	Link with job satisfaction
Openness to experience	Costa, P T & McCrae, R, 1992	Individuals have a tendency to have a willingness to try new things and be open to new ideas. This affords the opportunity for better relationships with coworkers and supervisors. Positive relationships with these individuals generally promote better job satisfaction.
	McCrae, R & Sutin, A, 2009	Individuals are less authoritarian and more receptive to input from others. These characteristics promote positive relationships with others, which in turn, increases likelihood of increased job satisfaction.
	Caprara, Barbaranelli, & Zimbardo, 1996	Findings indicate that openness to experience and irritability and hostility are negatively correlated. Positive relationships may be easily attained due to these traits, laying the foundation for increased job satisfaction.
Conscientiousness	Judge, Rodell, Klinger, Simon, & Crawford, 2013	High conscientiousness scores are correlated with increased performance. Those who perform with higher levels at work are more likely to also have higher satisfaction with that job.
	Carver & Connor-Smith, 2009	High conscientiousness individuals generally possess better coping strategies. Therefore, negative emotions, thoughts, or feelings are better managed, helping negate levels of dissatisfaction with one's job.
Extraversion	Costa, P T & McCrae, R, 1992	Higher scores for extraversion indicate a tendency toward positive emotions, increased social ability, and tend to be more friendly. These characteristics increase the likelihood for improved relationships with coworkers and a positive outlook about their jobs. These factors may contribute to increased job satisfaction.
Agreeableness	Graziano, Jensen-	Agreeable individuals strive to maintain harmonious

	Campbell, & Hair, 1996	relationships with others and are more likely to compromise in a negotiation or conflict situation to obtain resolution. This promotes more positive relationships with others and with the work itself.
	Skarlicki, Folger, & Tesluk, 1999	Individuals are characterized by being highly cooperative and sociable, thus more likely to get along with others and be accepting of work tasks and responsibilities.
	Judge et al., 2013	Those with low agreeableness generally lack concern for others, are less likely to hide aggressive behaviors and thus are more associated with conflict or the perception of conflict in the workplace. This may lead to less than optimal relationships with others and discontent for one's work or lower levels of job satisfaction.
Neuroticism	Costa, P T & McCrae, R, 1992 Hoobler & Hu, 2013	Increased levels have a propensity to be disruptive emotions and thoughts and are more likely to be susceptible to stress, anxiety, and insecurity. This leads to increased hostility and inappropriate coping responses.

Research has examined the role of personality in job satisfaction in professions outside of nutrition and dietetics (Bui, 2017; Eason et al., 2015; Foulkrod et al., 2010; Irissappane & Kavitha, 2014; Kayal & Das, 2016). This research comes from medical, or health-related fields as well as from fields outside of those fields. A general, national population survey of Big 5 personality traits and job satisfaction has also recently been published (Bui, 2017).

2.6.1 Job satisfaction and personality within the medical and health fields. Foulkrod et al. (2010) examined personality of trauma surgeons in relationship to their job satisfaction. These surgeons (n=412) completed a survey designed to determine if a relationship existed between personality characteristics and job satisfaction of trauma surgeons. Satisfied trauma surgeons scored significantly higher on the characteristics of extraversion and emotional stability than unsatisfied surgeons. Extraversion and emotional stability were significantly higher when comparing satisfied and unsatisfied surgeons (CITE). The authors concluded that extraversion

and emotional stability are the most predictive and important personality characteristics of job satisfaction of active trauma surgeons and that this finding has major implications for resident recruitment and retention in this area (Foulkrod et al., 2010).

In collegiate athletic trainers, the role of personality in job satisfaction was studied. Measurements included demographic information, a Big 5 personality characteristics inventory and a job satisfaction survey. Results from this study noted that women reported higher levels of neuroticism than men. A weak, positive relationship was demonstrated between extraversion and conscientiousness with job satisfaction. This result indicates that athletic trainers with higher extraversion or conscientiousness scores had higher job satisfaction, though the relationship was weak. A moderate positive relationship was found for job satisfaction with agreeableness, and a moderate negative relationship was found between neuroticism and job satisfaction (Eason et al., 2015).

2.6.2 Job satisfaction and personality in other fields, outside of medicine and health.

A research study utilizing the Big 5 personality characteristics with library employees in Calcutta University examined job satisfaction. While the research examined levels of routines with 100 university library employees, it also studied the relationships with job satisfaction and gender and personality characteristics. Findings from the study revealed that there were statistically significant differences between males and females, age, and time of service with levels of job satisfaction. The authors in this research concluded that there was a strong influence with the five factor model on employees' job satisfaction. Specifically, strong predictors of job satisfaction included extraversion, agreeableness, conscientiousness and neuroticism (Kayal & Das, 2016).

The purpose of a survey by Irissappane and Kavitha (2014) was to measure relationships between the Big 5 personality traits and job satisfaction of private and public sector telecom employees. Researchers collected data from 50 public sector and 50 private sector telecom employees using the Big 5 personality inventory and a 5 point Likert scale to measure job satisfaction. In reviewing overall personality profiles, the typical telecom employee was shown to be conscientious, extraverted, agreeable, and open, while not displaying neurotic dimensions. The Big 5 traits did not vary based on age, gender, or educational level with the sample. Employees with higher scores for conscientiousness and openness, and lower levels of neuroticism, scored higher in overall job satisfaction scores. Males, also, exhibited slightly higher scores in job satisfaction than females. Personality traits did not differ between public and private sector employees. Additionally, no differences were found between these employees related to levels of job satisfaction. It was the conclusion of these authors that higher levels of conscientiousness and openness, and lower levels of neuroticism, will be associated with higher levels of job satisfaction, regardless of the employment sector (private versus public) in which individuals work (Irissappane & Kavitha, 2014).

A study of 7,662 people in the United Kingdom was conducted to determine if relationships exist between the Big 5 personality traits in job satisfaction in a national sample. Surveys were completed that utilized the Big 5 Inventory short (BFI-S) for personality and a 7 point Likert scale measuring four aspects of job satisfaction to include the work itself, pay, job security, and hours worked. Results of this study reported relationships of each of the Big 5 personality traits and job satisfaction as positive, negative, or non-significant. Agreeableness and conscientiousness were positively associated with job satisfaction for male employees, while neuroticism and openness to experience were significantly negatively associated with job

satisfaction. For males, extraversion did not show a relationship toward job satisfaction. Compared to males, females' levels of job satisfaction were significantly positively associated with agreeableness and conscientiousness and significantly negatively associated with neuroticism. Openness to experience was not associated with job satisfaction for females and like males, extraversion was not associated with job satisfaction. This study also examined relationships between personality characteristics by age and levels of job satisfaction. Job satisfaction had a significant positive relationship for the middle aged group for agreeableness and conscientiousness and was negatively associated with neuroticism, while extraversion and openness to experience both had non-significant relationships. In contrast, in the older group, the only personality characteristic that showed a significant relationship was neuroticism, which was negatively associated. The other four traits of agreeableness, conscientiousness, extraversion, and openness to experience were not determinants of job satisfaction when looking at both males and females in the older age group. The author of this study noted several managerial implications that are relevant to general managers and organizations. Personality is important in determining levels of job satisfaction and should be reviewed during the recruitment and hiring process. Personality traits and job satisfaction also vary based on gender and age, so that more traits are determinants of job satisfaction in younger employees and those number of traits are greatly reduced in older employees. It is recommended that hiring managers should note which traits are seen as significant and which are not for levels of job satisfaction, taking into account age and gender. A more efficient recruitment process may be worth exploration with older employees as job satisfaction was shown to be based on one of the personality characteristics. Lastly, in addition to job satisfaction, personality traits have been correlated to other components of an employee's job and include training proficiency, counterproductive work

behavior, organizational citizenship behavior, and accident behavior. The authors noted that many variations can account for the differences demonstrated in this study and that future studies should look at some of these variables to gain a better understanding in different populations, environments, cultures, and regions among other factors (Bui, 2017).

2.7 Summary and Conclusions

Based on the above literature review, it can be ascertained that while there are data available among various professions, as well as the general population, for personality characteristics and job satisfaction, research should be conducted utilizing specific populations to gain a deeper insight into the specific field, career, or area of interest. With this information, additional research can examine intricacies that may include differences between gender, age, education and other demographic information as well as development of a typical pattern for a given profession. The current research study gained insights into the personality characteristics and job satisfaction of Registered Dietitian Nutritionists in the state of North Carolina that can be replicated using a larger sample in the future. Based on the results of this research, changes may be recommended to improve the hiring, recruitment and retention strategies utilized by organizations and groups associated with the profession of dietetics. Additionally, the leadership groups of the professional association may recommend curriculum and policy changes that address the challenges the profession currently faces as noted by the visioning report. These challenges include supply and demand, where supply is low and demand is high and expected to increase in the future, a lack of cultural diversity in the field, and an emphasis on various fields that further increase the shortage of practitioners for those specific practice areas within the profession.

CHAPTER 3

Methodology

Little evidence-based research exists in the field of nutrition and dietetics on leadership, personality characteristics and job satisfaction. While some information is available in other disciplines, this research sought to extend the research from other fields of study and apply it to the profession and field of nutrition and dietetics. This research was able to describe the five areas that most nutrition and dietetic practitioners are categorized into; clinical, community, food and nutrition management, education and research, and consultation, business, and private practice, through the use of personality characteristics. It also provides a framework for job satisfaction in the field as whole and practice areas of the profession. These areas are important for the profession to describe what a typical Registered Dietitian Nutritionist profile is in terms of personality characteristics and what level of job satisfaction the profession as a whole has. It is important to describe what the typical dietitian pattern is for a multitude of reasons that include providing a background for a hiring manager, clinical nutrition manager, or other employer hiring RDNs to maximize the opportunities for best fit for a prospective employee seeking to work in a particular setting, providing students interested in the overall field of nutrition and dietetics with a framework to match to the field, specifically to a particular area of the field, and lastly for current RDNs to explore their level of job satisfaction in their current job and determine if their personality is better suited and matched for another area of the field of nutrition and dietetics. This research measured job satisfaction within each of the practice areas of the profession and used a quantitative approach to describe personality and results with levels of job satisfaction. Each area of the fields were also stratified for further review and analysis.

This research utilized a survey method that employed a correlational, explanatory design to establish any possible relationships between the Big 5 personality characteristics of Registered Dietitian Nutritionists and job satisfaction in their current position. Analysis was conducted in each of the five main practice areas for RDNs in North Carolina. This research used descriptive statistics, correlation analyses, and multiple regression models to determine relationships between the variables examined. This following narrative outlines the research questions, rationale for using a quantitative approach, the research design, frames, participants, sampling strategy, sample size, variables, instruments, process of data collection and analysis, reliability and validity and the role of the researcher.

3.1 Research Questions

- RQ1: What is the influence of personality characteristics on job satisfaction for the RDN?
- RQ2: What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?
- RQ3: Is there a relationship between personality characteristics and the practice area of the RDN?
- RQ4: Is there a relationship between race, salary, age, or gender and job satisfaction?

3.2 Rationale for Quantitative Research Approach

Quantitative research studies, as stated by Creswell (2017), seek to test objectives by examining relationships among variables (Creswell, 2017). This research used a quantitative research survey to provide a numeric description of the participants' personality characteristics and levels of job satisfaction. The rationale for the current study was to utilize a quantitative approach to explore the personality characteristics and job satisfaction of Registered Dietitian Nutritionists (RDNs) in the five primary practice areas of the field of nutrition and dietetics.

A correlational design allows the researcher to provide a clearer understanding of the relationship between variables (Creswell, 2015). This quantitative correlational study provided keen insights with regard to how each of the Big 5 personality characteristics, openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, correlated to job satisfaction of the RDN both in the profession as a whole, as well as the five practice areas being examined. Using this approach, the variables were not manipulated by the researcher, but instead, the information was provided by the participants (Creswell, 2015). Additionally, the current design allowed the researcher to predict an outcome (Creswell, 2015). In this study, the researcher's goal was to be able to determine and predict which personality characteristics lead to increased job satisfaction in the profession overall, in addition to job satisfaction in any of the five specific practice areas that were examined.

3.3 Research Design, Strategy of Inquiry

This quantitative study utilized two validated surveys to gather information related to personality characteristics and job satisfaction (McCrae & Costa, 1987; van Saane, 2003). A convenience, criterion sample was used and provided surveys that encompassed: 1. the Big 5 personality characteristics assessment, 2. the Spector Job Satisfaction Survey and 3. a demographic information section. The sample could potentially be stratified in various ways to further investigate job satisfaction and personality characteristics. For example, any of the five practice areas of dietetics could be stratified to look at personality characteristics and/or levels of job satisfaction within that area. In the clinical area, personality characteristics were assessed using descriptives to provide averages and standard deviations for the Big 5 personality characteristics which were then correlated to job satisfaction in the clinical area of nutrition and dietetics.

3.4 Role of the Researcher

My research involved examining personality characteristics and levels of job satisfaction for the Registered Dietitian Nutritionist in the setting of clinical, community, food and nutrition management, education and research, and consultation, business, and private practice. I have been a Registered Dietitian for over 15 years and believe that, for the profession to grow and gain respect in the allied health arena, research must be conducted that contributes to the overall body of knowledge in the understanding of the people that make up the professionals in the field. The field of nutrition and dietetics and academic preparation for it focuses heavily on sciences such as chemistry, anatomy, and physiology. The field and the academic preparation for it would benefit by focusing on people, leadership and the development of these areas, especially for those that are already in leadership positions, or aspire to be managers and/or leaders in their organizations or within the professional association.

3.5 Frames

Findings in the literature have been mixed in terms of the Big 5 personality characteristics and their relationship to job satisfaction. This study sought to explore these relationships with Registered Dietitian Nutritionists working in their typical practice areas.

3.6 Participants and Recruitment

Participants were recruited by soliciting the North Carolina Academy of Nutrition and Dietetics and the North Carolina Board of Dietetics/Nutrition (the licensing board for the state) for emails to be sent to Registered Dietitian Nutritionists currently working in the field of nutrition and dietetics. Individuals were excluded from the study if they were currently not working within the field, were retired, or were student members in dietetics. In order to provide clarity, questions were provided in the demographic section that denoted the status (active,

retired, student) of the RDN. In addition to recruitment emails, the researcher was given five minutes to speak at the North Carolina Academy of Nutrition and Dietetics regional meeting in Winston-Salem, NC to call for active RDNs to complete the survey. Laptop computers were brought by the researcher and made available for participants to complete the survey on site at this event.

3.7 Sampling Strategy

Convenience sampling utilizes a group that is suitable and accessible to the researcher (Adams, Khan, & Raeside, 2014). While this strategy cannot be considered to be representative of an entire population, it can be used for looking at relationships within the sample and helping to answer questions and explain hypotheses (Creswell, 2015). A convenience sample was used for this study because of the availability to the researcher and application to the research being conducted. The researcher is a practicing Registered Dietitian Nutritionist in the state of North Carolina, from where the sample was obtained and had access to this population. Registered Dietitian Nutritionists received emails from the North Carolina Academy of Nutrition and Dietetics that provided information about this research and a link to complete the demographic, personality characteristics and job satisfaction section of the survey.

3.8 Sample Size

North Carolina has approximately 1300 Registered Dietitian Nutritionists in the 2018-2019 member year based on data for the North Carolina Academy of Nutrition and Dietetics. Approximately 297 responses were needed based on the adaptation shown in Appendix B from Krejcie and Morgan to determine sample size for research studies from a given population (Krejcie & Morgan, 1970). It was vital to obtain as many responses to the survey as possible to reduce the sampling error, or difference in potential error between the sample and the population

(Creswell, 2015). Challenges for obtaining a large enough sample size included limited access to participants, overall size of the population and funding (Creswell, 2015). In an effort to mediate these challenges, a convenience sampling strategy was used as indicated above.

3.9 Variables

Table 3.1 depicts the variables for this study including the type, measurement tool and components of the measurement tool. The dependent variable in this study is job satisfaction, while the independent variable in this study is personality (from the Big 5).

Table 3.1 <i>Variables and Measurement Tools</i>				
Variable Type	Type of Variable	Measuring	Measurement Tool	Subcomponents of Measurement Tool
Independent Variable(s)	Continuous	Personality	Big 5 Inventory (BFI)	<ul style="list-style-type: none"> • Openness to Experience • Conscientiousness • Extraversion • Agreeableness • Neuroticism
Dependent Variable	Continuous	Job Satisfaction	Spector Job Satisfaction Survey (JSS)	<ul style="list-style-type: none"> • Pay and remuneration • Promotion opportunities • Immediate supervisor • Monetary and nonmonetary fringe benefits • Appreciation, recognition, rewards for work • Operating policies and procedures

				<ul style="list-style-type: none"> • People you work with • Job tasks themselves • Communication within the organization • Total (Overall) job satisfaction
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3.10 Instruments

Data were collected using internet based survey instruments contained on Qualtrics. The survey consisted of three sections comprised of demographic information request, the Big 5 Inventory, and the Spector Job Satisfaction Survey. The first section gathered demographic information similar to the demographic information reported in the Academy of Nutrition and Dietetics Compensation and Benefits Survey of the Dietetics Profession, 2017 (Academy of Nutrition and Dietetics, 2017), to include general information such as age, gender and specific dietetic-related information such as years in profession, years in current job setting, and first career or second career. While minimal research supports the placement of demographic information or personal information sections at the beginning of surveys (Teclaw, Price, & Osatuke, 2012), other research is equivocal (Frick & Bächtiger, 1999; Giles & Feild, 1978; Green, Murphy, & Snyder, 2000) or shows higher response rates from demographic information requests at the end of a survey (Roberson & Sundstrom, 1990). Placement of the demographic information request at the beginning is noted as a potential limitation, though some researchers suggest that its placement does not impact response rates or validity of responses to the survey items (Frick & Bächtiger, 1999; Giles & Feild, 1978; Green, Murphy, & Snyder, 2000).

Frick and Bächtiger (1999) noted that odds are higher for participants to not complete personal information when requesting it when placed at the end of the experiment, while also

noting that participants may be worried about anonymity when personal information is requested at the beginning of a survey, and thus, may change their subsequent responses. However, personal information requested at the beginning of the survey did not correspond to questions being answered differently. The authors concluded that the placement (beginning or end) of the demographic information request does not influence the data (Frick & Bächtiger, 1999).

Andrews, Nonnecke, and Preece (2003) report that a perception of honesty toward the research by the participants is gained when the demographic information request is placed at the start of a survey. When a demographic information request is placed at the end of the survey, on the other hand, participants may react negatively and drop-out of the survey due the feeling or perception of being threatening (Andrews, Nonnecke, & Preece, 2003).

Teclaw et al., (2012) concluded that placing demographic information questions first might increase demographic item completion rate, while having no impact on items unrelated to demographics, but that future research examine these relationships further in different settings and with different populations (Teclaw et al., 2012). Current research involving three-part surveys that include demographic information, personality characteristics and job satisfaction all utilize the placement of the demographic information request at the beginning of their respective surveys (Eason et al., 2015; Foulkrod et al., 2010; Kayal & Das, 2016). This coupled with the researcher building upon the existing professional associations survey because of its familiarity to the population being studied justified its placement, though was identified as a limitation to this research.

The second section assessed personality characteristics through the Big 5 personality test (McCrae & John, 1992), utilizing the Big Five Inventory (BFI). The BFI measures five domains based on statements that are answered on a 5 point scale (1-disagree strongly to 5-agree

strongly). To assess job satisfaction in the third section of the survey, the Spector JSS (JSS) was used to assess the RDNs level of current job satisfaction (Spector, 1985).

Many instruments exist that measure job satisfaction. These instruments include types of surveys that are considered global, multidimensional, single item, and designed for specific jobs, as well as the general workforce (van Saane, 2003). While these various instruments all have advantages and disadvantages, several researchers have focused on the use of multidimensional surveys in an effort to help account for and explain levels of satisfaction or dissatisfaction with one's job (Batura, Skordis-Worrall, Thapa, Basnyat, & Morrison, 2016; Özpehlivan & Acar, 2015; Spector, 1997). The Spector Job Satisfaction Survey is a multidimensional tool that has 36 items within 10 subscales and uses a 6 point Likert scale with ranges of 1, very much disagree, to 6, very much agree. In a validation analysis by Batura et al., 2016, a mixed method research method was used to administer the JSS to 137 health workers, while qualitative data were collected from 78 health workers to assess validity and reliability in measuring job satisfaction. With the exception of community fit, the qualitative analysis revealed that the factors that impacted job satisfaction that were reported by the participants were consistent with the dimensions of the JSS. Reliability and validity were found to be in the acceptable limits by the quantitative assessment of this mixed methods study (Batura et al., 2016).

In a systematic review of instruments that measure job satisfaction, N van. Saane et al. (2003), reported reliability and validity measures for the JSS. Reliability, as reported through internal consistency and test-retest, was 0.91 and 0.71, respectively. Validity for the JSS was reported to be 0.61-0.80, which represents ranges from the JSS subscales (van Saane, 2003). The use of the subscales in the data analysis were not utilized in the current study, only overall job

satisfaction due to the focus on this research on overall job satisfaction. Future investigations could explore the job satisfaction subfields.

The use of the JSS by 301 military healthcare workers measured reliability and validity and concluded that these indexes were within an acceptable range and was considered valid and reliable for the population in the study. Specifically, the overall Cronbach's alpha for the study was 0.86, while all dimensions of job satisfaction also exhibited acceptable ranges, with the exception of the "operating procedures" domain with a value of 0.57 (Fesharaki, Talebiyan, Aghamiri, & Mohammadian, 2012).

The Big 5 personality characteristics percentile scores range on a continuum from 0-100. Scores on the higher end represent a higher degree of the personality characteristic as part of one's overall personality. This survey collected raw scores for the Big 5 personality characteristics. Possible job satisfaction scores range from 36-216 with a range of 36-108 representing dissatisfaction of one's job and 144-216 representing satisfaction of one's job. A job satisfaction score of 109-143 represents a neutral job satisfaction score.

3.11 Process of Data Collection

After receiving Institutional Review Board (IRB) approval, the North Carolina Academy of Nutrition and Dietetics (NCAND) and the North Carolina Board of Dietetics/Nutrition (NCBDN) were contacted and asked to coordinate an email to their respective memberships. The NCAND sent the email a total of three times to their membership. The email to potential participants included the purpose of the study, a short description of the survey and information on how consent would be obtained. From the recruitment email, participants were directed to a website where they provided consent and were able to begin the survey located in Qualtrics. Additionally, a request by the researcher was made to the NCAND to set up an area at the

association's regional meetings where laptops were provided for participants to complete this survey. The researcher also requested and was granted a 3-5 minute portion in the opening of the meeting to explain the purpose of the research to further help elicit attendees to participate.

Data were collected and housed in Qualtrics in a password protected manner. The survey used did not ask for any identifiable information, such as name of individual, name of organization the individual works for, or other identifiable information. Once the survey was completed and ready for analysis, data were transferred from Qualtrics to SPSS. This data set is stored on a flashdrive that is password protected and kept in the primary researcher's office in a locked desk drawer. Another password protected flashdrive was also used to back up this information, and is kept in the primary researcher's home office in a locked drawer.

3.12 Process of Data Analysis

The data set was prepared for analysis using SPSS. A frequency table was generated that includes all demographic information collected and summarized. A descriptives table was also generated to include means, standard deviations and the Big 5 personality characteristics, as well as each of the job satisfaction survey measures. Table 3.2 provides a summary of how research questions were analyzed.

Table 3.2			
<i>Statistical Procedures to Answer Research Questions</i>			
Research Question		Statistical Measurement	Explanation
1	Is there a relationship between personality characteristics and job satisfaction with the RDN?	Multiple Regression	-First examined correlations between demographic and extrinsic variables with job satisfaction. If strong correlations are found, consider controlling for those

			variables using hierarchical regression -Big 5 scores are predictor variables for personality -Outcome variable is overall job satisfaction score
2	Is there a relationship between personality characteristics and job satisfaction in the primary practice areas of the RDN?	Multiple Regression	-RDN subfield as the moderating variable to determine if the relationship between personality and job satisfaction changes depending on the subfield (practice area)
3	Is there a relationship between the Big 5 personality characteristics and the practice areas of the RDN?	ANOVAs	-DV-Big 5 factors -IV-RDN practice areas -can use post-hoc test to examine where the significant differences exist between the practice areas
4	Is there a relationship between demographic information and job satisfaction?	ANOVAs and <i>t</i> -test	Demographic data such as gender and ethnicity was examined in respect to job satisfaction to see if a relationship exists

A multiple regression was run to answer the research question, is there a relationship between personality characteristics and job satisfaction with the RDN? First, correlations were run and examined between the demographic and extrinsic variables with job satisfaction. If strong correlations were found, consideration was given to using a hierarchical regression to control for those variables. A hierarchical regression controls for all other variables in a model

and allowed the researcher to understand how much impact the independent variables have on the dependent variable and if this model is considered to be stable. The Big 5 scores served as the predictor variables in the model, while overall job satisfaction served as the outcome variable.

Research question two examined the practice areas as the variables that moderate the relationship between personality and job satisfaction. Multiple regression analysis was used with RDN subfield as the moderating variable to determine if the relationship between personality and job satisfaction changes depending on the subfield in which the RDN is working.

As seen in Table 3.2, research question three used five ANOVAs to assess the relationship between the personality characteristics and job satisfaction in the primary practice area of the RDN. The independent variable was the RDN practice area, and the dependent variables was the Big 5 personality characteristics. A post-hoc test can be used, if necessary, to examine where any significant differences exist between practice areas.

Research question four used independent *t*-tests and an ANOVA to determine if a relationship exists between demographic data, such as gender and ethnicity, and job satisfaction.

3.13 Handling of Missing Data

Several methods for handling missing data have been identified and reviewed in literature for researchers (Dong & Peng, 2013; Schlomer, Bauman, & Card, 2010). Data points that are missing in the collection process were analyzed to ensure that the pattern is characterized as missing completely at random (MCAR). MCAR is described as missing data that has no distinguishable pattern or rationale for being absent (Dong & Peng, 2013). The missing data handling methods appear in Table 3.3 and were further evaluated upon final completion of the data collection process. A final determination of how to handle missing data was determined at

that time. One overall consideration included how many total and complete responses were gathered compared to how many data points were missing and its relationship to the data handling methods presented below.

Table 3.3 <i>Methods of Handling Missing Data</i>		
Section of Missing Data	Method Used	Explanation/Criteria
Demographics	Report only responses	Researcher used only collected data for analysis
Big 5 Inventory (personality)	Imputation of the mean	If less than or equal to 3 data points, imputation of the mean using questions matched to a particular characteristic. Example: If one question pertaining to the characteristic of extraversion is missing, imputation to the mean will be used based on the other extraversion based questions to replace missing information.
	Listwise deletion	If greater than 3 data points were missing, all responses were eliminated from that section.
Job Satisfaction Survey (JSS)	Imputation of the mean	If less than or equal to 3 data points, imputation of the mean using questions matched to a particular subheading. Example: If one question pertaining to the subheading of remuneration is missing, imputation to the mean will be used based on the other remuneration based questions to replace missing information.
	Listwise deletion	If greater than 3 data points are missing, all responses will be eliminated from that section
<i>Note.</i> Consideration was given to total responses collected, as well as the total number of responses per practice area subfield, when decisions for the methods to handling missing data.		

3.14 Outliers in the Collected Data Set

The survey instrument was composed of three parts. The first part, which included a demographic section, the Big 5 Inventory (BFI), and the Job Satisfaction Survey (JSS), which are the second and final parts of the survey, respectively. The BFI is a 1-5 Likert scale, while the JSS is a 1-6 Likert scale, thus providing no outliers to the data set. The demographic section provides minimal open-ended questions that would not produce outlier data points in the data set.

3.15 Reliability, Validity, and Generalizability

Reliability and validity are important factors to consider to ensure effectiveness and competence in research (Thanasegaran, 2009). Reliability is quality measurement ensuring that the study maintains consistency and the measurements can be repeated (Leedy, & Ormrod, 2016). In this data set, Cronbach's alpha were run for each of the Big 5 personality characteristics to determine reliability. Cronbach's alpha values were determined to be as follows: openness 0.805, conscientiousness 0.771, extraversion 0.881, agreeableness 0.756, neuroticism 0.789. If needed, this can be run in relationship to each of the practice areas.

Validity, also a quality measure, ensures the research is accurate, has meaning and is credible (Leedy & Ormrod, 2016). In quantitative research, the types of validity that should be examined are the instruments and the internal and external threats to validity. Reasons why researchers may be incorrect or wrong in their inferences are referred to as threats to validity and should be addressed in the research. Two categories of threats to validity are threats to internal validity and threats to external validity. While internal validity relates to the conclusions made about a cause and effect relationship between the independent and dependent variables, external

validity is related to how the researcher generalizes the cause and effect relationship to other groups, settings, or other measurements (Creswell, 2015).

There are three subcategories of threats to internal validity as described by Creswell (2015) that include those threats that are related to participants, threats that are related to treatments, and threats that are related to the procedures of the research. Appendix C provides a summary of the possible threats to internal validity and how they are accounted for in this research.

External validity is related to issues that threaten the ability of the researcher “to draw correct inferences from the sample to other persons, settings, treatment variables and measures” (Creswell, 2015, p. 306). Subcategories of threats to external validity applicable to this study include interaction of selection and interaction of history. Table 3.4 outlines the possible threats to external validity that are most applicable to this research.

Table 3.4 <i>Threats to External Validity</i>		
Interaction of selection	Difficulty in generalizing results to other groups beyond the study	By sending survey links via email and recruitment at local dietetic meetings, convenience to the survey is increased, allowing for as many participants as possible from the sample
Interaction of history	Trying to generalize findings to past and future situations	Study may be replicated in the future to help validate results. Demographic information may also help strengthen validity here by accounting for differences in work experiences and roles.

3.16 Summary

This quantitative study used two quantitative surveys to gather information related to personality characteristics and job satisfaction of RDNs in North Carolina. The appropriate statistical tests analyzed the data to answer the four research questions for this study. Results for this analysis are presented in chapter 4 with implications and future research directions discussed in chapter 5 of this manuscript.

CHAPTER 4

Results

4.1 Introduction

The purpose of this study was to examine the relationship of personality characteristics and job satisfaction of Registered Dietitian Nutritionists (RDN) in North Carolina. The following research questions were used to guide and direct this study:

RQ1: What is the influence of personality characteristics on job satisfaction for the RDN?

RQ2: What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?

RQ3: Is there a relationship between personality characteristics and the practice area of the RDN?

RQ4: Is there a relationship between race, salary, age, or gender and job satisfaction?

Chapter 4 focuses on the statistical results of the data analyses. The first section details the sample with the results of the data analyses in the second section of this chapter.

4.2 Population and Sample

The population for this research was Registered Dietitian Nutritionists that are active in North Carolina. The sample for this study included 380 participants who self-identified as actively working in the state of North Carolina at the time of data collection. This sample size exceeds the minimum number indicated for external validity (Krejcie & Morgan, 1970). The response rate for this survey was approximately 23%. The approximate response rate was based on the emails sent out for survey completion request, in addition to the number of RDNs that

attended the local NCAND meeting where the announcement to request survey completion was provided. Table 4.1 provides descriptive data about the sample population.

Table 4.1			
<i>Participant Demographic Information, (n=380)</i>			
Category		n	%
Gender			
	Male	10	2.6
	Female	370	97.4
Age			
	24 and younger	7	1.8
	25-29	81	21.3
	30-34	74	19.5
	35-39	48	12.6
	40-44	28	7.4
	45-49	28	7.4
	50-54	34	8.9
	55-59	36	9.5
	60-64	31	8.2
	65 and older	11	2.9
	Missing	2	0.5
Race			
	White	356	93.7
	Black or African American	10	2.6
	Asian	5	1.3
	Other	6	1.6
	Multiple Race	3	0.8
Career Path			
	1st Career	298	78.4
	2nd Career	82	21.6
Practice Area			
	Clinical	200	52.6
	Community	57	15.0

Employment Section	Food and Nutrition Management	34	8.9
	Consultation, business, private practice	51	13.4
	Education and research	38	10.0
	Self Employed	29	7.6
	For-Profit	113	29.7
	Non-Profit (not government)	167	43.9
	Government	70	18.4
	Missing	1	0.3
Current Position Experience	Less than 1	79	20.8
	1-5	174	45.8
	6-10	43	11.3
	11-15	29	7.6
	16-20	24	6.3
	21-25	8	2.1
	26-30	10	2.6
	More than 30	13	3.4
Salary	Less than \$30,000	27	7.1
	\$30,000-39,999	26	6.8
	\$40,000-49,999	77	20.3
	\$50,000-59,999	97	25.5
	\$60,000-69,999	64	16.8
	\$70,000-79,999	34	8.9
	\$80,000-89,999	15	3.9
	\$90,000-99,999	6	1.6
	\$100,000-109,999	6	1.6
	\$110,000-119,999	2	0.5
	\$120,000-129,999	3	0.8
	More than \$130,000	5	1.3
	Missing	18	4.7

4.3 Data Analysis

RQ1: What is the influence of personality characteristics on job satisfaction for the RDN?

A linear regression was conducted to predict overall job satisfaction based on the Big Five personality characteristics. A significant regression equation was found ($F(5,357) = 14.222$, $p < .001$), with a r^2 of .166. Participants' predicted score is equal to $116.537 - .077$ (extraversion) + 1.362 (agreeableness) + $.136$ (conscientiousness) – 1.166 (neuroticism) + $.027$ (openness). Overall job satisfaction score increased 1.362 for every 1 unit increase in agreeableness and decreased by 1.166 for every 1 unit increase in neuroticism. Both agreeableness ($p < .001$) and neuroticism ($p < .001$) were significant predictors of overall job satisfaction. Table 4.2 shows the mean score for overall job satisfaction and raw scores for each of the Big 5 personality characteristics, as well as standard deviations for both, while Appendix D shows a rank order for the Big 5 personality characteristics from highest to lowest.

Table 4.2				
<i>Mean and Standard Deviation Scores for Job Satisfaction and Big 5 Personality Characteristics</i>				
	<u>N</u>	<u>Mean</u>	<u>Std Deviation</u>	<u>Range</u>
Total Job Satisfaction	364	150.78	23.61	69-205
Extraversion	380	26.83	6.81	11-40
Agreeableness	380	39.48	3.86	25-45
Conscientiousness	379	38.68	4.4	25-45
Neuroticism	380	20.31	5.6	8-39
Openness	380	36.38	6.16	15-50

Tables 4.3 - 4.5 provides the model summary, ANOVA, and coefficient results for the regression examining the Big 5 and Job Satisfaction.

Table 4.3				
<i>Model Summary for Regression for Big 5 and Job Satisfaction</i>				
<u>Model</u>	<u>R</u>	<u>R square</u>	<u>Adjusted R Square</u>	<u>Std Error</u>
1	.408	.166	.154	21.709
*Predictors: Openness, Conscientiousness, Neuroticism, Extraversion, Agreeableness				

Table 4.4					
<i>Model Significance for Big 5 and Job Satisfaction</i>					
<u>Model 1</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig</u>
Regression	33515.413	5	6703.083	14.222	<.001
Residual	168259.513	357	471.315		
Total	201774.926	362			
Dependent Variable: Total Job Satisfaction					
Predictors: Openness, Conscientiousness, Neuroticism, Extraversion, Agreeableness					

Table 4.5

Coefficients for Regression for Big 5 and Job Satisfaction

<u>Model</u>	<u>Unstandardized B</u>	<u>Std Error</u>	<u>Standardized B</u>	<u>t</u>	<u>sig</u>
Constant	116.537	17.824		6.538	.000
Extraversion	-.077	.180	-.022	-.427	.670
Agreeableness	1.362	.320	.223	4.250	<.001
Conscientiousness	.136	.276	.025	.492	.623
Neuroticism	-1.166	.221	-.276	-5.288	<.001
Openness	.027	.195	.007	.136	.892
*Dependent Variable: Total Job Satisfaction					

RQ2: What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?

Statistical significance run at the less than or equal to .05 level was shown in job satisfaction scores comparing the clinical nutrition practice area to consultation, business, and private practice, with clinical having significantly lower levels of overall job satisfaction compared to the RDNs in the consultation, business, and private practice area. This can also be stated that RDNs in consultation, business and private practice from this survey had higher levels of job satisfaction when compared to clinical RDNs.

A multiple regression was run with the RDN practice area as the moderating variable and total job satisfaction as the dependent variable and examined relationships between the personality characteristics and job satisfaction based on the RDN practice area. Results shown in table 4.6 demonstrate several driving factors of job satisfaction based on practice area and

personality characteristics. For the clinical practice area, neuroticism was negatively correlated to job satisfaction ($p<.01$), while agreeableness was positively associated with job satisfaction ($p<.01$). Agreeableness was also positively correlated with job satisfaction in the community practice area ($p<.05$), as well as the food and nutrition management practice area ($p<.05$). Openness was correlated with job satisfaction in the community practice area ($p<.10$). In the consultation, business, and private practice area, neuroticism was negatively associated with job satisfaction ($p<.05$).

Table 4.6

Multiple Regression Coefficients (B) for Practice Areas and Big 5, (N=380)

<u>Practice Area</u>	<u>Big 5 Characteristics</u>				
	<u>Extraversion</u>	<u>Agreeableness</u>	<u>Conscientiousness</u>	<u>Neuroticism</u>	<u>Openness</u>
Clinical Nutrition	-0.09	1.2***	0.42	-1.5***	0.03
Community Nutrition	0.04	1.64**	1.08	-0.19	0.83*
Food and Nutrition Management	-0.85	2.98**	-1.84*	-0.98	0.02
Consultation, Business, Private Practice	0.93	0.21	0.37	-1.45**	-0.65
Education, Research	-0.08	1.65	0.09	-0.42	-0.10
<i>Note. * $p < .10$, **$p < .05$, ***$p < .01$ Dependent variable=job satisfaction</i>					

RQ3: Is there a relationship between the personality characteristics and the practice area of the RDN?

A one-way ANOVA was conducted to compare effects of RDN practice area on the Big Five personality characteristics and job satisfaction. The results were as follows:

- An analysis of variance showed that the difference in extraversion scores between the RDN practice areas was significant, $F(4,375)=3.54, p=.007$.
- An analysis of variance showed that the difference in agreeableness scores between the RDN practice areas was not significant, $F(4,375)=.550, p=.699$.
- An analysis of variance showed that the difference in conscientiousness scores between the RDN practice areas was not significant, $F(4,374)=.646, p=.630$.
- An analysis of variance showed that the difference in neuroticism scores between the RDN practice areas was not significant, $F(4,375)=.313, p=.869$.
- An analysis of variance showed that the difference in openness scores between the RDN practice areas was significant, $F(4,375)=2.798, p=.026$.
- An analysis of variance showed that the difference in overall job satisfaction scores between the RDN practice areas was not significant, $F(4,359)=1.559, p=.185$.

A LSD post hoc test was run to further explore mean differences and significance between practice areas with the following results and also as shown on Table 4.7.

For extraversion, the clinical practice area RDNs had lower extraversion than consultation, business, and private practice RDNs, or also stated that consultation, business, and private practice RDNs had higher extraversion than clinical RDNs. Clinical RDNs had lower extraversion than food and nutrition management RDNs, or food and nutrition management RDNs had higher extraversion than clinical RDNs. RDNs in the community practice area had lower extraversion than consultation, business, and private practice RDNs, or consultation,

business, and private practice RDNs had higher extraversion than RDNs in the community practice area.

For the personality characteristic of openness, two significant relationships were found. The practice area of clinical dietetics had lower openness than food and nutrition management, also stated in reverse, food and nutrition management had higher openness than clinical RDNs. Clinical RDNs also had lower openness than education and research RDNs, or otherwise stated, education and research RDNs had higher openness than clinical RDNs.

Table 4.7				
<i>Mean Differences and Significance between Big 5 and Practice Areas</i>				
Characteristic	Comparative Practice Areas		Mean Difference	sig
Extraversion	Clinical	Consultation, Business, Private Practice	-3.41	.001
	Clinical	Food and Nutrition Management	-2.67	.034
	Community	Consultation, Business, Private Practice	-3.59	.006
	Consultation, Business, Private Practice	Clinical	3.41	.001
	Food and Nutrition Management	Clinical	2.67	.034
	Consultation, Business, Private Practice	Community	3.59	.006
Openness	Clinical	Food and Nutrition Management	-2.89	.011
	Clinical	Education, Research	-2.48	.022

	Food and Nutrition Management	Clinical	2.89	.011
	Education, Research	Clinical	2.48	.022
No significant relationships existed between the Big 5 characteristics of neuroticism, conscientiousness, or agreeableness and practice areas.				

RQ4: Is there a relationship between race, salary, age, or gender and job satisfaction?

ANOVAs were run to look at differences between race, age, salary, and job satisfaction.

When examining race and job satisfaction, a significant difference is shown between white and multiple race RDNs, in that white RDNs have lower job satisfaction than multiple race RDNs ($p=.024$). However, there are 341 white RDN responses, compared to 3 multiple race responses. The overall significance of this model was .051.

In investigating salary range and job satisfaction, the model significance was .253. The following individual relationships were found, but limited by the number of responses in some of the categories. Income of less than \$30k, \$30-39k, \$60-69k, \$80-89k, \$90-90k, and \$100-109k all had higher levels of job satisfaction than compared to the salary range of \$110-119k. However, the number of responses for \$90-99k, \$100-109k, \$110-119k, and \$120-129k were 6, 6, 2, and 3 respectively. When examining the relationship between age and job satisfaction, no significant relationships were found.

An independent samples t-test was performed to examine relationships between gender (male and female) and job satisfaction. No significant differences were found. It should be noted again the sample provided limited responses in some categories. In this demographic question there were 10 male responses compared to 354 female responses. The non-normalized distributions this sample has for race, age, salary, and job satisfaction decrease the feasibility of

drawing broad conclusions from the analysis for this research questions. When the data was run with only females, the model variance changes from 15.4% to 15.1% (females only). One difference was for the significance of extraversion comparing the clinical practice area and the food and nutrition management area, changing from 0.034 to 0.056 for the female only sample. All other results were similar.

4.4 Reliability

Cronbach's Alpha was run to measure internal reliability for the each of the Big 5 personality characteristics and job satisfaction with the following results show in table 4.8.

Table 4.8		
<i>Reliability for Big 5 Personality Characteristics and Job Satisfaction</i>		
	Cronbach's Alpha	N of items
Openness	0.805	10
Conscientiousness	0.771	9
Extraversion	0.881	8
Agreeableness	0.756	9
Neuroticism	0.789	8
Job Satisfaction	0.903	36

A summary of the key results, from the data in the study, are included below:

- The personality characteristic of agreeableness is positively correlated with job satisfaction in RDNs in North Carolina.
- The personality characteristic of neuroticism is negatively correlated with job satisfaction in RDNs in North Carolina.
- The Big 5 inventory accounts for 15.4% of the variance in the model.

- The practice area of clinical dietetics has lower job satisfaction than consultation, business, and private practice RDNs in North Carolina.
- Neuroticism is negatively correlated with job satisfaction in the clinical and consultation, business and private practice areas.
- Based on practice area, agreeableness is positively correlated with job satisfaction in clinical, community, and food and nutrition management.
- The practice area of clinical dietetics has lower extraversion than food and nutrition management and consultation, business, and private practice.
- Clinical has lower openness than food and nutrition management and education and research practice area RDNs.

CHAPTER 5

Discussion and Implications

The purpose of this study was to examine the relationship of personality characteristics and job satisfaction of Registered Dietitian Nutritionists in North Carolina. Personality characteristics were defined by the Big 5 personality test, while the practice areas for the RDNs included clinical, community, food and nutrition management, education and research, and consulting, business, and private practice. Personal and professional characteristics were also collected to obtain background information about education level, years of experience, years in current area, and other demographic information. An in-depth analysis of these variables was completed using SPSS with results reported in chapter 4 of this document. This chapter includes a discussion of the findings, implications, and areas of future research.

This chapter also includes a discussion of the practical and theoretical implications for the research findings to the practitioners working in the field of nutrition and dietetics, those interested in becoming RDNs, and those in leadership positions in the field. The limitations of the research and final summary conclusions are also included.

5.1 Discussion of the Results

This study sought to determine the relationship between personality characteristics and job satisfaction of Registered Dietitian Nutritionists in North Carolina and to further explore these relationships based on practice areas and other demographic information. The researcher examined the answers to research questions by analyzing data from a survey that included the following three components: demographic information, personality characteristics from the Big Five Inventory, and job satisfaction of the Spector Job Satisfaction Survey. The findings to each research question are presented, followed by a discussion of these findings.

Research Question 1. What is the influence of personality characteristics on job satisfaction for the RDN?

Based on the analysis of the data from this study, the results showed that the Big 5 personality characteristics inventory accounted for 15.4% of the variance in the model. This is higher than the previous findings of Furnham and Eracleous (2009) that found a variance of between 11-13% for the impact of personality on job satisfaction (Furnham, Eracleous, & Chamorro-Premuzic, 2009). Two correlations were shown to be significant between personality characteristics and overall job satisfaction. Agreeableness was positively correlated with overall job satisfaction for all RDNs in this research. Neuroticism, in contrast, was negatively correlated with overall job satisfaction for all RDNs in this dataset. The other three personality characteristics of conscientiousness, openness, and extraversion were not shown to be significantly correlated to overall job satisfaction for all RDNs in this sample. For the personality characteristic of neuroticism, these results are consistent with the meta-analysis of Judge, et al. (2002) that demonstrate neuroticism is negatively correlated with job satisfaction across various professions (Judge, Heller, & Mount, 2002).

The finding of agreeableness being positively correlated with job satisfaction supports the Mroz and Kaleta (2016) findings of agreeableness significantly relating to job satisfaction in the service professions (Mróz & Kaleta, 2016). Service professionals, both commercial and non-commercial, identified in this study were nurses, restaurant servers, receptionists, coaches and accountants. In collegiate athletic trainers, a moderate positive relationship was found with agreeableness and overall job satisfaction, though this relationship was not found to be significant (Eason et al., 2015). In contrast to the current research, the meta analysis by Judge et

al. (2002) did not report agreeableness to have a significant relationship with job satisfaction overall across studies (Judge et al., 2002).

Research Question 2. What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?

Based on the analysis of this data, RDNs working in the clinical practice area had significantly lower overall job satisfaction scores than those working in the consultation, business, and private practice area. No other significant differences were found between practice areas, however, several relationships were found when exploring the driving factor of job satisfaction within the practice areas. For the clinical practice area, neuroticism was shown to have a negative correlation with overall job satisfaction, while agreeableness was found to be positively correlated with overall job satisfaction. These results mirror the overall results found for all RDNs, regardless of practice area. In the community practice area, agreeableness was shown to be positively correlated with overall job satisfaction. Likewise, agreeableness was shown to be positively correlated to overall job satisfaction for the food and nutrition management practice area. In the practice area of consultation, business, and private practice, neuroticism was demonstrated to have a negative correlation to overall job satisfaction.

The finding of these relationships may be explained by the job itself, which in this research is defined by the practice area. This supports the reports of Saari and Judge (2004) that employee personality is linked to job satisfaction and that one of the drivers connecting the relationship between personality and job satisfaction is the job itself. This situational effect helps explain differences in job satisfaction based on in this research the difference in the job itself between practice areas.

Research Question 3. Is there a relationship between personality characteristics and the practice area of the RDN?

In reviewing the analysis of the Big 5 personality characteristics of the practice areas, two of the Big 5 characteristics, extraversion and openness, showed significant differences. Specifically, the RDNs working in the clinical practice area were shown to have lower extraversion than those working in consultation, business, and private practice or it could be stated that RDNs working in consultation, business, and private practice have higher levels of extraversion. Practically this makes sense due to the more entrepreneurial undertakings of those working in that setting, compared to the more corporate and traditional structure of the facilities, such as acute care hospitals, long term care facilities, and nursing homes, where clinical RDNs are generally employed. Most consultation, business, and private practice RDNs have startup companies or are involved in other undertakings where resources are scarce and skills such as marketing and communication are the key to generating revenue and income for the owner(s) and provider(s) (Matheson, 2013).

Research Question 4. Is there a relationship between race, salary, age, or gender and job satisfaction?

Job satisfaction was examined in relationship to age, gender, race, and salary. Although there were some differences found, these are limited based on the number of responses for each category. For example, of the 364 total responses for gender, females accounted for 354 responses or approximately 97%, while males accounted for 10 responses or approximately 3%. Similar findings for race also existed. From 364 responses, 341 respondents selected white, while black or African American, Asian, other, and multiple races were 10, 4, 6, and 3 respectively.

Future research should work to collect a greater number of responses from individual groups of participants that are less represented in the current study to support or refute research that women generally have higher levels of job satisfaction than their male counterparts (Clark, 1997; Okpara, Squillace, & Erond, 2005). In a similar manner, race should be further explored to support or refute research that race impacts levels of job satisfaction (Gold, Webb, & Smith, 1982; Hersch & Xiao, 2016). A summary of findings by associated research question is presented in Table 5.1.

Table 5.1		
<i>Summary of Findings by Research Question</i>		
RQ1	What is the influence of personality characteristics on job satisfaction for the RDN?	<p>-The personality characteristics of agreeableness is positively correlated with job satisfaction in RDNs in North Carolina.</p> <p>- The personality characteristics of neuroticism is negatively correlated with job satisfaction in RDNs in North Carolina.</p> <p>-The Big 5 inventory model accounts for 15.4% of the variance in the model.</p>
RQ2	What is the influence of personality characteristics on job satisfaction in the practice areas of the RDN?	<p>-The practice area of clinical dietetics has lower job satisfaction than consultation, business, and private practice RDNs in North Carolina.</p> <p>-Neuroticism is negatively correlated with job satisfaction in the clinical and consultation, business and private practice areas.</p> <p>-Agreeableness is positively correlated with job satisfaction in the clinical, community, and food and nutrition management practice area.</p>
RQ3	Is there a relationship between personality characteristics and the	-The practice area of clinical dietetics has lower extraversion than food and nutrition

	practice area of the RDN?	management and consultation, business, and private practice. -Clinical practice area RDNs has lower openness than food and nutrition management and education and research practice area RDNs.
RQ4	Is there a relationship between race, salary, age, or gender and job satisfaction?	Limited response rates for some variables limits the ability to determine significance.

5.2 Implications

The current research has implications for the three key challenges in the profession. These are supply and demand, a lack of diversity, and the current emphasis in only one of the five major practice areas. This research may also provide insights on how intrinsic and extrinsic factors could be utilized to influence these key challenges. These impacts include aspects inside and outside the field of nutrition and dietetics to include the practice of nutrition and dietetics, the leadership of that field specifically, and to overall leadership studies, as well as leadership theory.

5.2.1 Practice. As evidenced by the data collected from this research, overall job satisfaction was reported to be higher in individuals that have higher levels of agreeableness and lower levels of neuroticism. It should be noted that because several others factors can influence job satisfaction, future research should further explore these factors. These other factors could include the components that make up overall job satisfaction. The goal of this research, however, was to examine overall job satisfaction.

Those seeking to go into the field of nutrition and dietetics, such as students in nutrition and dietetics, public health or other health sciences programs, may also use this as an

informational guide to help understand their overall level of job satisfaction in the field.

Providing students with the Big 5 personality inventory, and the accompanying results may be one method to help increase the likelihood of job satisfaction in the field for those entering it in the future. In doing so, one of the key challenges of the profession, the emphasis in one of the five main practice areas may be addressed through intrinsic and extrinsic factors. Using the extrinsic factor of the type of job, or practice area of the job, someone looking to go into the field of nutrition and dietetics may select a practice area outside of the clinical emphasis.

Additionally, having information related to job satisfaction and the intrinsic factor of personality, may help someone decide that they may be better suited for an underemphasized practice area.

This information may also be utilized for students that are unsure of what profession or academic preparation they are interested in to help address the lack of diversity in the profession, as well as the supply and demand of the profession, two of the professions key challenges. Students may possibly make decisions to enter the profession of nutrition and dietetics based on this information. If this information is provided to more students, it may help to increase the supply of RDNs in the field. In giving this information to more students as a whole, a more diverse population may be exposed to the information and also possibly make the decision to enter into the profession. As future studies are needed to increase information about these underrepresented populations, obtaining this additional information in partnership with the current information from this study could be utilized to increase the diversity and supply of RDNs in the profession.

5.2.2 Leadership. Leadership can be divided between leadership within the field of dietetics and to overall leadership studies. Within the field of nutrition and dietetics, professional organizations can use this information to obtain a better understanding of how personality

characteristics influence job satisfaction in the field. Having a better understanding of overall job satisfaction can lead to higher career satisfaction and job performance, thus helping to elevate the profession as a whole. The Academy of Nutrition and Dietetics can encourage those that are already in the field that are not satisfied with their job to use this information to determine if a change in practice area would increase the likelihood of increased job satisfaction. Likewise, the professional association can encourage students studying nutrition and dietetics to use this information to help them make a more informed decision about possible career paths and possible practice areas, using their Big 5 personality inventory results and job satisfaction as a guide. In exploring possible career paths, a student may find that they are more interested in a practice area outside of the heavily emphasized clinical area and more interested in jobs more related to health, wellness, and preventative care, which currently have an increased demand in the US. An emphasis in exploring various career paths may impact the challenges of demand in the area of preventative care, as well as the professions emphasis outside of the clinical area.

For leadership studies, the results of this research indicate that while some markers of personality are universal, researchers should continue to investigate differences between various professions, practitioners, and practice areas. As the field of leadership studies expands, accompanying research should continue to explore those areas and factors that are universal to job satisfaction among a variety of occupations, while also investigating relationships that may be unique and specific to a group of individuals. In this research, the field of nutrition and dietetics was studied for practitioners or RDNs in North Carolina collectively, but also explored the various practice areas that exist.

5.3 Recommendations for Future Research

The purpose of this study was to examine the relationship of personality characteristics and job satisfaction of Registered Dietitian Nutritionists in North Carolina. Other factors, however, may contribute to overall job satisfaction and should be further studied. These factors may include the components that make up overall job satisfaction, such as pay or coworkers, or other demographic variables such as first career RDN versus second career, or years of experience in the field. Further examining relationships with demographic and other relevant information will be beneficial to contribute to the overall body of knowledge involving RDN job satisfaction.

One of the implications for leadership studies from this research is that there are some factors that influence job satisfaction that are universal, while there are also those factors that influence job satisfaction that are unique and specific to a particular group, profession, occupation, or practice area. In addition to further exploring those factors that influence job satisfaction, researchers should expand the professions and practice areas that have been specifically studied. For example, this research investigated Registered Dietitian Nutritionists in North Carolina and explored overall relationships as well as those between and within practice areas of this field that include clinical, community, food and nutrition management, education and research, and consultation, business, and private practice. Similar research should be conducted to look at professions such as nursing, physical therapy, and social work, for example. Each of these professions, similarly to nutrition and dietetics, have various practice areas and would benefit from having information that is specific to their profession.

In addition to increasing the specificity of the literature that exists in various professions, current research could be further explored by practice area divisions. The clinical practice area

category, for example, can be further stratified into inpatient, outpatient and long term care, which may show variations between each other, though they are considered to fall into the broader clinical practice area. Further exploration of practice areas will also allow researchers to keep up with trends in practice areas. As an example, sports nutritionists and performance dietitians have seen an increase in the number of jobs in recent years. These practitioners are generally considered to be grouped into the community category. These practitioners can work in collegiate or professional sports environments, which are very different from other community RDNs that may work in WIC, at health departments, and other areas of public health. Research should examine if any additional differences or relationships are discovered within broader groups such as these and how these correspond with their overall practice area and with other practice areas.

Lastly, researchers should increase the scope of this investigation to a national sample. The current study used RDNs in North Carolina and set a foundation from which additional research can be conducted to examine if this sample is reflective of a larger population and to identify what relationships or differences exist in various geographic areas of the United States. Do RDNs in the southeastern region of the US all have similar personality characteristics within that region or compared to RDNs in the Northeast US? Additionally, how do these characteristics correspond to those of the population in general? Does job satisfaction of RDNs in the Southeastern US compare to those in the mid-west US and if not, how do they differ?

From this national sample, more information could be provided by underrepresented groups than compared to the current study. More information from males and African American, Asian, and multiple and mixed race RDNs would allow for better comparisons between groups and within groups. Likewise, including a qualitative research design would also allow for further

exploration of whole group similarities and differences, and across RDN type to better understand characteristics important to that group. As an example, females could be further examined to see what they qualitatively believe is important for job satisfaction. Males and underrepresented races and ethnicities, in a similar manner, could be asked questions pertaining to why they entered the profession. The inclusion of this survey to specific Dietetic Practice Groups, DPGs, and Member Interest Groups, MIGs, is another way the study could be enhanced at the national level to incorporate underrepresented groups. The Academy of Nutrition and Dietetics DPGs that could be utilized include the National Organization of Men in Nutrition and Dietetics (NOMIN), Indians in Nutrition and Dietetics (IND), Latinos and Hispanics in Dietetics and Nutrition (NOBIDAN), and Cultures of Gender and Age (COGA). Obtaining this information is vital for the profession in order to start to address the key challenge of a lack of diversity in the profession. This information will start to help better understand the intrinsic and extrinsic factors that are important and valued by underrepresented groups in this study in relationship to overall job satisfaction. This additional information will allow for similarities and differences to be determined and based on this the professional association can develop strategic initiatives and plans to address the lack of diversity in the profession specifically.

Similarly, once national level data is gathered, information can be compiled and then used to strategically and systematically address all three challenges to the profession including supply and demand, lack of diversity, and emphasis in one practice area, based on intrinsic and extrinsic factors that were used in the current study. These intrinsic and extrinsic factors should also be explored further to gather information that helps address all three of the profession's key challenges identified in its visioning report.

5.4 Limitations of the Study

Limitations to this research included the following: self reported data, results that are not generalizable to the entire profession, potential for multiple responses from the same individual, the intended use of this information, and the possibility of an increase in experimentwise error due to the increased number of significance tests utilized. Due to the survey nature of this research, the participants self-selected answers to questions on all parts of the survey. Results that were obtained were not generalizable to the field of nutrition and dietetics due to the sample being obtained from RDNs in the state of North Carolina. Results from this research are also not generalizable to North Carolina due to the uncertainty of the demographic composition of the respondents. An attempt was made to compare the demographic information of the research data to that of the North Carolina Academy of Nutrition and Dietetics, but this information was not available. Additional research should be considered to obtain data from a national population to increase generalizability of results. Random sampling should also be used in place of the convenience sampling in the current research. The intended use of this research was to determine patterns that may identify job satisfaction levels and optimal practice area placement for RDNs. The intended use of this research is not to create stereotypes for hiring organizations, RDNs, or others that may utilize information and results from this study. An increase in the possibility for an experiment wise error exists due to the increased number of significance test that were utilized in this research. Research question three, for example, uses five ANOVAs for analysis.

5.5 Conclusion

Based on the results from this research, there is a relationship between the personality characteristics of agreeableness and neuroticism to the overall job satisfaction of active

Registered Dietitian Nutritionists in North Carolina. In comparing the main practice areas, RDNs working in the clinical practice area had significantly lower overall job satisfaction scores than those working in the consultation, business, and private practice area. Personality profiles for each of the practice areas demonstrated that extraversion and openness are the two Big 5 personality characteristics that differ between particular practice areas. This research also demonstrated little to no differences in demographic information, such as race, gender, salary and age with overall job satisfaction. Future research should explore this and other relationships that may exist with job satisfaction in the field of nutrition and dietetics. Future expansion of this study to a national sample and other professions would extend the knowledge base in these areas.

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Appendix A

Literature Review Summary

Appendix A			
<i>Literature related to job satisfaction</i>			
Author(s)	Findings	Connection to, or implication on, current research	Relationship(s) to key challenges in dietetics (Workforce supply/demand, diversity, practice area emphasis)
Coomber and Barriball, 2007	<p>-With nurses, stress at work, and leadership issues were sources of dissatisfaction for nurses contributing to the high turnover rates.</p> <p>-Education and pay were found to contribute to job satisfaction.</p>	Data from the current study will be used to identify trends and/or sources of job satisfaction / dissatisfaction.	Workforce supply/demand- If sources of job satisfaction and dissatisfaction are identified, leadership at the organizational or profession levels may focus on those to decrease attrition and turnover.
Mobley, et al., 1978	<p>-Job satisfaction was not correlated with actual turnover rates, but was correlated with intention to search for a new job and thoughts of quitting.</p> <p>-Dissatisfaction with an individual's job may contribute to a less than ideal employee attitude and morale</p> <p>-Individuals who have higher job satisfaction are less likely to leave a job or organization than those who have lower levels of job satisfaction</p>	Levels of job satisfaction/dissatisfaction contribute to employee intentions to quit, as well as, employee morale. Data from this research will be used to measure overall job satisfaction levels of RDNs in NC, as well as in each of the primary practice areas for the RDN.	Practice area emphasis-If entry level practitioners are better matched for job satisfaction to work areas, more dietitians may move into non-clinical practice areas and not focus as much on the clinical setting.
Cotton and Tuttle, 1986	- Overall job satisfaction, satisfaction with work itself, pay, satisfaction with the supervisor and	Overall job satisfaction will be generated from the data to determine what contributes to those	Practice area emphasis- Results may help explain why a practice area might show higher or lower levels of job

	organizational commitment were shown to be highly significant. -Confirmed results of Mobley, Horner, and Hollingsworth	levels. This research could look at any variations that exist between various practice areas as well for the RDN.	satisfaction based on setting. Leadership at the national or organizational levels can use this to help guide decision making and job structure decisions.
Leider et al., 2016	Indicators of job satisfaction were pay, organizational support and employee involvement, with pay being a primary indicator of job dissatisfaction.	The current research could determine if pay will be shown to be an indicator of both job satisfaction and dissatisfaction for RDNs.	Workforce supply/demand-If pay contributes to both job satisfaction and dissatisfaction, leadership can focus on this issue to determine where differences exist.
Altuntas, 2014	Overall, factors that were shown to impact job satisfaction were job title, academic experience, staff status and education levels, with the highest levels of satisfaction occurring in the colleagues and quality of work dimensions, and lowest levels of job satisfaction shown in the dimensions of coursework and pay.	Similar to nurses, RDNs work in various settings, so it is important to understand any differences that may exist between these areas.	Workforce supply/demand-Understanding job satisfaction factors in the education and research area may allow for better retention and recruitment in that area of dietetics.
Andrioti et al., 2017	The primary source of satisfaction was the dimension of self-growth and responsibility, while the dimensions of interaction and recognition, leadership style and organizational policies and remuneration and nature of work served the primary sources for job dissatisfaction.	Remuneration and nature of work are both aspects of the JSS and are important to understand for the dietetics profession.	Practice area emphasis-Data gathered in the current study could be analyzed for differences in remuneration between practice areas. If clinical settings have higher pay, this could be used to explain the emphasis on the clinical setting for the practitioner.
Lu et al., 2011	Sources of job satisfaction included working conditions, interaction, relationships with patients, relationships with co-workers, management, the work itself, remuneration, psychological rewards,	The research could determine if other variables (personality) are related to job satisfaction for the RDN profession, if controlling for the variables that impact overall job satisfaction.	Diversity-Personality patterns may be created that are better matches for the profession as a whole, as well as specific practice areas within the profession. Recruitment into the field could be expanded with this knowledge.

	control and responsibility, job security and leadership styles and organizational policies. Another interesting note from this review was that job satisfaction was related to self-esteem, as a moderating or mediating variable.		
Yang et al, 2011	Results on the five factors: pay, promotion and coworkers were significantly related with job satisfaction at the 0.01 level; the job itself was significantly related at the 0.05 level, while the supervisor was significantly related at the .10 level, demonstrating the importance of all five factors	All of these areas could be studied in the current research and analyzed for their contribution to overall job satisfaction of the RDN.	Workforce supply/demand- Overall contributions to job satisfaction are important to ascertain in the dietetics profession to help increase RDN supply, while decreasing turnover and attrition rates.
Jones et al, 2009	Dissatisfaction with one's job was opportunity for promotion	The current research could determine if this is a challenge for the RDN.	Workforce supply/demand & practice area emphasis- If differences exist in job satisfaction based on opportunity for promotion in various practice areas, this issue should be addressed by leadership at the national or organizational levels.

Appendix B

Table of Recommended Sample Sizes (n) for Populations (N) with Finite Sizes

N	n		N	n		N	n
10	10		220	140		1,200	291
15	14		230	144		1,300	297
20	19		240	148		1,400	302
25	24		250	152		1,500	306
30	28		260	155		1,600	310
35	32		270	159		1,700	313
40	36		280	162		1,800	317
45	40		290	165		1,900	320
50	44		300	169		2,000	322
55	48		320	175		2,200	327
60	52		340	181		2,400	331
65	56		360	186		2,600	335
70	59		380	191		2,800	338
75	63		400	196		3,000	341
80	66		420	201		3,500	346
85	70		440	205		4,000	351
90	73		460	210		4,500	354
95	76		480	214		5,000	357
100	80		500	217		6,000	361
110	86		550	226		7,000	364

120	92		600	234		8,000	367
130	997		650	242		9,000	368
140	103		700	248		10,000	370
150	108		750	254		15,000	375
160	113		800	260		20,000	377
170	118		850	265		30,000	379
180	123		900	269		40,000	380
190	127		950	274		50,000	381
200	132		1,000	278		75,000	382
210	136		1,100	285		100,000	384

Adapted from Krejcie & Morgan, 1970

Appendix C

Threats to Internal Validity

Appendix B			
<i>Threats to Internal Validity</i>			
Threats related to participants	Threat	Explanation	Rationale
	History	Having different conditions during different treatments	Research design does not involve treatments
	Maturation	Change during time period of pre-test and post-test	Research design does not involve a pre-test or a post-test
	Regression	Selecting participants based on extreme scores to increase differences	Participants are randomly selected and no change in scores will be measured for the dependent variable
	Selection	People that are more highly motivated to make a change	Participants do not receive experimental interventions
	Mortality	Individuals who drop out	Survey will be provided at one point in time, data that are incomplete will be managed appropriately in data analysis process

Threats related to treatments	Diffusion of treatments	Communication between experimental and control groups	Research design does not utilize a treatment groups
	Compensatory equalization	Inequality of treatments given to experimental group	Research design does not utilize a treatment
	Compensatory rivalry	Competition that may exist between the control and experimental groups	Research design does not utilize a control or experimental group
	Resentful demoralization	Feelings of remorse or devaluation from the control group	Research design does not utilize a control or experimental group
Threats related to procedures	Testing	Familiarity that is gained from participants performing similar tests	Surveys are given at one point in time and not repeated for this study
	Instrumentation	The change of assessment tool(s)	Survey will not be modified or manipulated during data collection process

Appendix D

Rank Order of Big 5 Personality Characteristics for sampled population

1. Agreeableness
2. Conscientiousness
3. Openness
4. Extraversion
5. Neuroticism

Appendix E

The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	2	3	4	5

I see Myself as Someone Who...

- | | |
|---|---|
| ___1. Is talkative | ___23. Tends to be lazy |
| ___2. Tends to find fault with others | ___24. Is emotionally stable, not easily upset |
| ___3. Does a thorough job | ___25. Is inventive |
| ___4. Is depressed, blue | ___26. Has an assertive personality |
| ___5. Is original, comes up with new ideas | ___27. Can be cold and aloof |
| ___6. Is reserved | ___28. Perseveres until the task is finished |
| ___7. Is helpful and unselfish with others | ___29. Can be moody |
| ___8. Can be somewhat careless | ___30. Values artistic, aesthetic experiences |
| ___9. Is relaxed, handles stress well | ___31. Is sometimes shy, inhibited |
| ___10. Is curious about many different things | ___32. Is considerate and kind to almost everyone |

- | | |
|--------------------------------------|--|
| ___11. Is full of energy | ___33. Does things efficiently |
| ___12. Starts quarrels with others | ___34. Remains calm in tense situations |
| ___13. Is a reliable worker | ___35. Prefers work that is routine |
| ___14. Can be tense | ___36. Is outgoing, sociable |
| ___15. Is ingenious, a deep thinker | ___37. Is sometimes rude to others |
| ___16. Generates a lot of enthusiasm | ___38. Makes plans and follows through with them |
| ___17. Has a forgiving nature | ___39. Gets nervous easily |
| ___18. Tends to be disorganized | ___40. Likes to reflect, play with ideas |
| ___19. Worries a lot | ___41. Has few artistic interests |
| ___20. Has an active imagination | ___42. Likes to cooperate with others |
| ___21. Tends to be quiet | ___43. Is easily distracted |
| ___22. Is generally trusting | ___44. Is sophisticated in art, music, or literature |

Please check: Did you write a number in front of each statement?

BFI scale scoring (“R” denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36

Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42

Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R

Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39

Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Appendix F

Job Satisfaction Survey

	<p>JOB SATISFACTION SURVEY</p> <p>Paul E. Spector</p> <p>Department of Psychology</p> <p>University of South Florida</p> <p>Copyright Paul E. Spector 1994, All rights reserved.</p>	
	<p>PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</p>	<p>Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much</p>
1	I feel I am being paid a fair amount for the work I do.	1 2 3 4 5 6
2	There is really too little chance for promotion on my job.	1 2 3 4 5 6
3	My supervisor is quite competent in doing his/her job.	1 2 3 4 5 6
4	I am not satisfied with the benefits I receive.	1 2 3 4 5 6
5	When I do a good job, I receive the recognition for it that I should receive.	1 2 3 4 5 6
6	Many of our rules and procedures make doing a good job difficult.	1 2 3 4 5 6
7	I like the people I work with.	1 2 3 4 5 6
8	I sometimes feel my job is meaningless.	1 2 3 4 5 6
9	Communications seem good within this organization.	1 2 3 4 5 6
10	Raises are too few and far between.	1 2 3 4 5 6
11	Those who do well on the job stand a fair chance of being promoted.	1 2 3 4 5 6
12	My supervisor is unfair to me.	1 2 3 4 5 6
13	The benefits we receive are as good as most other organizations offer.	1 2 3 4 5 6

14	I do not feel that the work I do is appreciated.	1 2 3 4 5 6
15	My efforts to do a good job are seldom blocked by red tape.	1 2 3 4 5 6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1 2 3 4 5 6
17	I like doing the things I do at work.	1 2 3 4 5 6
18	The goals of this organization are not clear to me.	1 2 3 4 5 6

Appendix G

Qualtrics Survey

Personality Characteristics and Job Satisfaction of RDNs in NC

Q1

Welcome to the research study!

Study Title: Personality Characteristics and Job Satisfaction of Registered Dietitian Nutritionists in North Carolina

Principal Investigator: Paul Moore – Ph.D. candidate in Leadership Studies

Faculty Advisor: Dr. Karen Jackson – Leadership Studies

Dear Respondent,

I am inviting you to participate in a research study about the personality characteristics of Registered Dietitian Nutritionists and Job Satisfaction in North Carolina. You are being asked to participate because you are a Registered Dietitian Nutritionist currently working in the state of North Carolina. The procedure involves completing a survey that will take approximately 15 minutes. The survey questions will be about certain characteristics of your personality and your current levels of job satisfaction. Through your participation I hope to understand if personality characteristics contribute to overall job satisfaction in the field of nutrition and dietetics, as well as the area of dietetics in which you work (ie, clinical, community, etc). You must be at least 18 years old to participate. To protect your confidentiality, the survey will not contain information that will personally identify you, and I will not ask for your name. All information

collected in this study will be kept completely confidential to the extent permitted by law. Your email address will be requested so that we can place you in a drawing to receive a free/discounted North Carolina Academy of Nutrition and Dietetics Regional Meeting voucher. However, it will be stored separately from any data collected in the study. At the end of the survey you will be directed to a separate location so that your email address is not directly tied to your survey answers. This project has been approved by the Institutional Review Board (IRB) at North Carolina A&T State University. Your participation is voluntary and there is no penalty if you do not participate. You may stop the survey at any time or skip any questions you do not wish to answer.

If you have any questions about completing the questionnaire or about being in this study, you may contact me at pbmoore@aggies.ncat.edu. You may also contact my research advisor at cookpala@ncat.edu. If you have any study-related concerns or any questions about your rights as a research study participant, you may contact the Office of Research Compliance and Ethics at North Carolina A&T State University at (336) 285-3183 or email rescomp@ncat.edu. By completing this survey, you are indicating that you at least 18 years old, have read this document, have had any questions answered, and voluntarily agree to take part in this research study. You may print a copy of this consent agreement for your records.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

Sincerely, Paul Moore PhD Candidate in Leadership Studies North Carolina A&T State University

- ☐ I consent, begin the study
- ☐ I do not consent, I do not wish to participate

End of Block: Informed Consent

Start of Block: Demographic Information

I am currently employed or self-employed as a RD/RDN in a nutrition/dietetics related position in North Carolina?

- ☐ Yes
- ☐ No

Is your current nutrition/dietetics position a second career for you?

- ☐ No, it is my first career
- ☐ Yes, it is a second career
-

Employment sector for your primary position?

- ☐ Self-employed
 - ☐ For-profit
 - ☐ Non-profit (other than government)
 - ☐ Government
-

What is the city of your primary work location?

What is the zip code of your primary work location?

On average, what is your approximate commute in MINUTES from your home residence to your primary work location?

- ☐ 0- 5 minutes
 - ☐ 6-10 minutes
 - ☐ 11-15 minutes
 - ☐ 16-20 minutes
 - ☐ 21-25 minutes
 - ☐ 26-30 minutes
 - ☐ 31-35 minutes
 - ☐ 36-40 minutes
 - ☐ 41-45 minutes
 - ☐ 46-50 minutes
 - ☐ 51-55 minutes
 - ☐ 56-60 minutes
 - ☐ More than 60 minutes
-

What is your approximate commute in MILES from your home residence to your primary work location?

- ☐ 0-5 miles
 - ☐ 6-10 miles
 - ☐ 11-15 miles
 - ☐ 16-20 miles
 - ☐ 21-25 miles
 - ☐ 26-30 miles
 - ☐ 31-35 miles
 - ☐ 36-40 miles
 - ☐ 41-45 miles
 - ☐ 46-50 miles
 - ☐ 51-55 miles
 - ☐ 56-60 miles
 - ☐ More than 60 miles
-

Including you, how many people are employed by your organization? Please count all types of positions at all locations, full and part time.

- ☐ 1 (only you)
 - ☐ 2-9
 - ☐ 10-49
 - ☐ 50-99
 - ☐ 100-249
 - ☐ 250-499
 - ☐ 500-999
 - ☐ 1,000-2,499
 - ☐ 2,500-4,999
 - ☐ 5,000-9,999
 - ☐ 10,000-24,999
 - ☐ 25,000 or more
-

How many years have you worked in your current primary nutrition/dietetics-related position?

- ☐ Less than 1
 - ☐ 1-5
 - ☐ 6-10
 - ☐ 11-15
 - ☐ 16-20
 - ☐ 21-25
 - ☐ 26-30
 - ☐ More than 30
-

Which ONE option best matches the PRACTICE AREA where you spend most time in this position?

- ☐ Clinical Nutrition, inpatient
 - ☐ Clinical Nutrition, outpatient/ambulatory
 - ☐ Clinical Nutrition, long term care
 - ☐ Community Nutrition
 - ☐ Food and Nutrition Management
 - ☐ Consultation, business, private practice
 - ☐ Education, research
-

What is your current job title?

What is your position's responsibility level?

- ☐ Employee
 - ☐ Executive
 - ☐ Director or Manager
 - ☐ Supervisor or Coordinator
 - ☐ Owner/Partner
 - ☐ Other
-

In this position, how many employees do you directly or indirectly supervise?

- ☐ 0
 - ☐ 1-2
 - ☐ 3-4
 - ☐ 5-9
 - ☐ 10-24
 - ☐ 25-49
 - ☐ 50-99
 - ☐ 100 or more
-

In this position, approximately what is the size of the budget you manage (if applicable)?

- ☐ Does not apply
 - ☐ Less than \$25,000
 - ☐ \$25,000-49,999
 - ☐ \$50,000-99,999
 - ☐ \$100,000-249,999
 - ☐ \$250,000-499,999
 - ☐ \$500,000-999,999
 - ☐ \$1 million or more
-

Is your current position?

- ☐ Full time
 - ☐ Part time
 - ☐ PRN (as needed)
-

What is your annual salary or wage for this position?

- ☐ Less than \$30,000
 - ☐ \$30,000-39,999
 - ☐ \$40,000-49,999
 - ☐ \$50,000-59,999
 - ☐ \$60,000-69,999
 - ☐ \$70,000-79,999
 - ☐ \$80,000-89,999
 - ☐ \$90,000-99,999
 - ☐ \$100,000-109,999
 - ☐ \$110,000-119,999
 - ☐ \$120,000-129,999
 - ☐ More than \$130,000
-

How are you paid in this position?

- ☐ Per diem or hourly
 - ☐ Regular Wage / Salary
-

What is your gender?

- ☐ Male
- ☐ Female
-

What is your age?

- ☐ 24 and younger
- ☐ 25-29
- ☐ 30-34
- ☐ 35-39
- ☐ 40-44
- ☐ 45-49
- ☐ 50-54
- ☐ 55-59
- ☐ 60-64
- ☐ 65 and older
-

Are you of Hispanic, Latino, or Spanish origin?

☐ Yes

☐ No

What is your race? (select all that apply)

☐ White

☐ Black or African American

☐ American Indian or Alaska Native

☐ Asian

☐ Native Hawaiian or Pacific Islander

☐ Other

What degrees have you earned that are NUTRITION/DIETETICS related? (select all that apply)

☐ Doctorate

☐ Masters

☐ Bachelors

What degrees have you earned that are in other areas, NOT nutrition/dietetics specific? (select all that apply)

☐ Doctorate

☐ Masters

☐ Bachelors

Other than the RD/RDN credential, what nutrition/dietetics related credentials do you currently hold?

- ☐ Advanced Practice Certification in Clinical Nutrition
- ☐ Licensed Dietitian Nutritionist
- ☐ CDE - Certified Diabetes Educator
- ☐ CDM - Certified Dietary Manager
- ☐ CFE - Certified Food Executive
- ☐ CFM - Certified Food Manager
- ☐ CFPP - Certified Food Protection Professional
- ☐ CHES - Certified Health Education Specialist
- ☐ CLS - Clinical Lipid Specialist
- ☐ CNSC - Certified Nutrition Support Clinician
- ☐ CSG - Certified Specialist in Gerontological Nutrition
- ☐ CSOWM - Certified Specialist in Obesity and Weight Management
- ☐ CSO - Certified Specialist in Oncology Nutrition
- ☐ CSP - Certified Specialist in Pediatric Nutrition
- ☐ CSR - Certified Specialist in Renal Nutrition
- ☐ CSSD - Certified Specialist in Sports Dietetics
- ☐ FADA - Fellow of the American Dietetic Association

☐ FAND - Fellow of the Academy of Nutrition and Dietetics

☐ None

What is the job title of your current supervisor? (if applicable)

End of Block: Demographic Information

Start of Block: Personality

Q3 Personality

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please select a rating next to each statement to indicate the extent to which you agree or disagree with that statement.

I see myself as Someone Who:

	Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly
Is talkative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tends to find fault with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does a thorough job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is depressed, blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is original, comes up with new ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is reserved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is helpful and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

unselfish with others					
Can be somewhat careless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is relaxed, handles stress well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is curious about many different things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is full of energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starts quarrels with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is a reliable worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Can be tense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is ingenious, a deep thinker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generates a lot of enthusiasm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Has a forgiving nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tends to be disorganized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worries a lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has an active imagination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tends to be quiet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is generally trusting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tends to be lazy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is emotionally stable, not easily upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is inventive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has an assertive personality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Can be cold and aloof	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perseveres until the task is finished	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Can be moody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Values artistic, aesthetic experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is sometimes shy, inhibited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is considerate and kind to almost everyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does things efficiently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remains calm in tense situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prefers work that is routine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is outgoing, sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is sometimes rude to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makes plans and follows through with them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gets nervous easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likes to reflect, play with ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has few artistic interests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likes to cooperate with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is easily distracted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is sophisticated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

in art, music,
or literature

End of Block: Personality

Start of Block: Job Satisfaction

my job because
of the
incompetence of
people I work
with.

I like doing the
things I do at
work.

The goals of this organization are not clear to me.

I feel
unappreciated
by the
organization
when I think
about what they
pay me.

People get ahead
as fast here as
they do in other
places.

My supervisor

shows too little
interest in the
feelings of
subordinates.

The benefit
package we have
is equitable.

There are few
rewards for
those who work
here.

I have too much
to do at work.

I enjoy my
coworkers.

I often feel that I
do not know
what is going on
with the
organization.

I feel a sense of
pride in doing
my job.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

I feel satisfied
with my chances

for salary
increases.

☐☐☐☐☐☐

There are
benefits we do
not have which
we should have.

☐☐☐☐☐☐

I like my
supervisor.

☐☐☐☐☐☐

I have too much
paperwork.

☐☐☐☐☐☐

I don't feel my
efforts are
rewarded the
way they should
be.

☐☐☐☐☐☐

I am satisfied
with my chances
for promotion.

☐☐☐☐☐☐

There is too
much bickering
and fighting at

☐☐☐☐☐☐

work.						
My job is						
enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work						
assignments are						
not fully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
explained.						

End of Block: Job Satisfaction

Appendix H

Examples of Practice Areas with job

Primary Practice Area	Possible Job/Title
Clinical	Acute Care/Inpatient Ambulatory Care Long Term Care Clinical Dietitian Clinical dietitian specialist Nutrition Support Dietitian
Community	WIC Nutritionist Public Health Nutritionist Cooperative Extension Educator/Specialist School/Child care Nutritionist Nutrition Coordinator for Head Start Program Nutritionist for Food Bank or Assistance Program
Food and Nutrition Management	Director of Food and Nutrition Services Director of Clinical Nutrition Clinical Nutrition Manager Assistant Foodservice Director School Foodservice Director
Consultation and Business	Private Practice Dietitian

	<p>Consultant Dietitian</p> <p>Sales Representative</p> <p>Public Relations and Marketing Professional</p> <p>Research and Development Nutritionist</p> <p>Manager of Nutrition Communications</p> <p>Director of Nutrition</p>
Education and Research	<p>Instructor/Lecturer</p> <p>Assistant Professor</p> <p>Associate Professor</p> <p>Professor</p> <p>Administrator, Higher Education</p> <p>Dietetic Internship Director</p> <p>Research Dietitian</p>