FACTORS IMPACTING JOB SATISFACTION OF REGISTERED DIETITIAN NUTRITIONISTS WHO DO AND DO NOT PRECEPT STUDENTS

By Jennifer L. Hernandez

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Approved:

Gretchen McAllister, Ph.D., Chair

Claudia Rodas, Ph.D.

Nanette V. Lopez, Ph.D.

Dawn E. Clifford, Ph.D., R.D.N.

ABSTRACT

FACTORS IMPACTING JOB SATISFACTION OF REGISTERED DIETITIAN NUTRITIONISTS WHO DO AND DO NOT PRECEPT STUDENTS

JENNIFER L. HERNANDEZ

Preceptors are essential components of dietetics education, providing practical instruction to future Registered Dietitian Nutritionists (RDNs). Preceptors are generally not employed by educational providers, making their recruitment and retention a challenge to program directors and a limiting factor to how many students can complete educational requirements for the profession. Job satisfaction in RDNs has been studied; however, no known studies of correlates of preceptor role satisfaction were found. This study uses Career Construction Theory (Savickas, 2005) to frame discussions around RDN job and precepting satisfaction. Five hundred sixty (560) RDNs completed a survey including demographics, Spector's Job Satisfaction Survey (Spector, 1985), Michigan Organizational Assessment Questionnaire (Spector, n.d.-b), and Clance Impostor Phenomenon Scale (Clance, n.d.). Correlates of satisfaction, including years of experience, age, utilizing a mentor, and impostor phenomenon, were assessed. Both job and preceptor role satisfaction had a positive correlation with reporting having a mentor and a negative correlation with impostor phenomenon. The majority of RDNs did not report high impostor phenomenon scores, with no differences by primary practice area. RDNs with a doctorate reported lower levels of impostor phenomenon than those with a bachelor degree. A large proportion of RDNs were satisfied with their jobs and precepting experiences, with a similar proportion reporting ambivalence. No significant difference was found in mean job satisfaction scores by practice area; however, people

with experience as a preceptor and those who had received mentoring reported higher satisfaction scores than those who never precepted students or never had someone they considered a mentor. The data suggest that mentors may help RDNs work through career self-image and challenges faced in job roles. Implications for practice and future research are discussed, including exploration of how RDNs utilize mentorship and how those relationships are linked to reduced impostor phenomenon feelings and enhanced job/ role satisfaction, as well as potential benefits of formal mentoring programs for educational programs and employers.

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This project never would have happened without a few key moments in my life. One day I walked past Dr. Clifford's office and heard her refer to other people as "real dietitians." When talking about how both Dr. Clifford and I referred to others as real dietitians and therefore think that we are "fake dietitians," Julia Gardner directed me toward impostor phenomenon and the Clance Impostor Phenomenon Scale.

In my very first job as a Registered Dietitian, Trey Bledsoe introduced me to the teachings of Dr. John C. Maxwell. Thanks to Dr. Maxwell's teachings I learned the value of mentorship and my journey to personal and professional growth, self-worth, and professional aspirations are constantly evolving.

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TABLE OF CONTENTS

PAGE

LIST OF TABLES

TABLE PAGE

LIST OF FIGURES

FIGURE PAGE

DEDICATION

This dissertation is dedicated to

my mother, who told me from a young age that I was going to attend college because she never did,

and my daughter who watched me work to achieve this goal and earn my degree.

CHAPTER I

STATEMENT OF THE PROBLEM

In the United States, credentialed nutrition and dietetics practitioners are called Registered Dietitians or Registered Dietitian Nutritionists (RDNs). According to the Bureau of Labor Statistics (2022), jobs for dietitians and nutritionists will increase by approximately 7% in the next 10 years, amounting to about 5000 new jobs, for a total of 80,000 jobs in nutrition and dietetics. A recent survey of the dietetics profession by the Academy of Nutrition and Dietetics indicated that the median age of credentialed professionals is 41 years, and that 22% are aged 55 years and older (Dosedel, 2021), meaning that over 20,000 professionals could potentially retire in the coming decade. This increase in new jobs coupled with replacing people aging out of the workforce leads to an increased need for educational opportunities for students.

There are multiple pathways into the profession of dietetics (Accreditation Council for Education in Nutrition and Dietetics, n.d.-a), and despite some technical differences, they all require both didactic and supervised practice components (Academy of Nutrition and Dietetics, n.d.-f). The supervised practice component requires RDNs or other qualified nutrition professionals acting as preceptors to oversee the practical instruction of students in common working environments. Having a reliable pool of preceptors is an essential component of dietetic educational programs; therefore, ensuring that dietitians are equipped for and comfortable in their role as preceptors is necessary for the future of the profession. The purpose of this dissertation is to examine various intrapersonal and interpersonal factors concerning preceptors. Specifically, this

exploratory research examines the potential relationships among impostor phenomenon, job satisfaction, and precepting dietetic students.

Background of the Problem

The Accreditation Council for Education provides annual enrollment numbers by program type. In 2022, 4703 people graduated from Didactic Programs in Dietetics (Accreditation Council for Education in Nutrition and Dietetics, n.d.-c). In that same year, 3482 students applied for Dietetic Internships (DI), and of those, 907 applicants were not accepted into internship programs (Accreditation Council for Education in Nutrition and Dietetics, n.d.-b). It is unknown if those applicants were accepted into other dietetic program types, did not meet minimum admissions requirements for programs, or if supervised practice program capacity was limited preventing their acceptance. If those applicants were not accepted into other dietetic program pathways, they would be unable to complete the requirements to become RDNs. One limiting factor previously identified is the number of dietitians available and willing to serve as preceptors (Moelter, 2016).

Fundamental issues for dietetics program administrators include the acquisition and retention of preceptors. Several researchers have explored ways to increase the number of preceptors and have identified responsibilities, benefits, and barriers to precepting (AbuSabha, et al., 2018; Bergman, 2013; Caldwell-Freeman & Mitchell, 2000; Connor, 2015a, 2015b; Hernandez et al., in press; Nasser et al., 2014; Roofe & Landry, 2018; Winham et al., 2014; Wolf & Robinson, 2002). Key findings in these studies indicated that practitioners perceive both benefits and barriers in their roles, including enjoyment in the role but also time constraints as well as not feeling valued. A Canadian study (Nasser et al., 2014) identified commonly agreed upon responsibilities of

preceptors, but there is only one known study examining preceptor confidence in those roles (Hernandez et al., n.d.) and no known studies exploring satisfaction with the role as a preceptor. This study will examine some of the possible factors in preceptor role satisfaction, including impostor phenomenon and job satisfaction.

Impostor Phenomenon

In 2019, Hernandez et. al. (unpublished) expanded on the preceptor responsibilities identified by Nasser et al. (2014) and surveyed RDNs working in clinical settings about their self-confidence in those responsibilities. Levels of reported self-confidence with precepting responsibilities brought up questions of a possible lack of confidence due to impostor phenomenon, which is a feeling of not earning or deserving success and frequently worrying about being found to be a fraud (Clance & Imes, 1978). A small study of undergraduate students in a general research course found that impostor phenomenon negatively correlated with self-confidence (Leary et al., 2000).

Initially identified in women, people who experience impostor phenomenon feel like luck, a mistake, or some sort of deception has led to the perception of success in many high achieving people (Clance & Imes, 1978). Sufferers often credit external factors such as interpersonal relationships, as opposed to internal factors such as intelligence, for their achievements. Feelings of anxiety, depression, and low self-confidence correlate with impostor phenomenon. As the body of evidence grew, some studies corroborated the belief that impostor phenomenon was more prevalent in women (Jöstl et al., 2012; Oriel et al., 2004; Prata & Gietzen, 2007) while others found no difference in the prevalence of impostor phenomenon in men compared to women (Kamarzarrin et al., 2013; Langford & Clance, 1993; Vergauwe et al., 2015).

Several opinions and commentaries have been written about impostor phenomenon within various health care professions (Aubeeluck et al., 2016; Gasalberti, 2014; Kets de Vries, 2005; McAllum, 2016; Robinson-Walker, 2011). Impostor phenomenon has been described as impacting nurses in leadership positions, with some feeling like they had to repeatedly defend their positions and others with traditional feelings of not deserving their success (Robinson-Walker, 2011). Impostor phenomenon has been identified in pharmacy students (Panjwani & Karpen, 2019) and physicians, including emergency medicine doctors (Borhart, 2015) and medical interns (Ramsey & Spencer, 2019). Research has indicated that a lack of confidence in abilities can influence patient care and could also impact the quality of interactions with students. Additionally, people who score high in impostorism tend to be protective of their image and may disengage from activities in which they may be publicly evaluated (Leary et al., 2000).

Despite multiple studies identifying impostor phenomenon within groups of high achieving people (Aubeeluck et al., 2016; Borhart, 2015; Clance & Imes, 1978; Kamarzarrin et al., 2013; Oriel et al., 2004; Panjwani & Karpen, 2019; Prata & Gietzen, 2007; Ramsey & Spencer, 2019), no studies examining impostor phenomenon among RDNs were published prior to 2022. The two known studies of impostor phenomenon in Registered Dietitian Nutritionists indicated rates within the profession similar to or higher than in other healthcare professions (Hernandez & Lopez, 2023; Landry et al., 2022); however, neither study reported if respondents served as preceptors.

Job Satisfaction

Job satisfaction is defined as how much a person likes or enjoys their job, and is one of the most highly researched variables in organizational and industrial psychology

(Spector, 1997, p. vii). Exploring job satisfaction among workers can identify appropriateness of work conditions, emotional health and wellbeing, and positive and negative traits of the worksite, unit, or field (Spector, 1997, p. 2). Job satisfaction can be assessed through individual interviews or surveys. Multiple scales exist for evaluating job satisfaction in a variety of settings, although most were designed with industrial workers in mind. The Job Satisfaction Survey was designed specifically to identify satisfaction of healthcare and service workers in public and nonprofit settings, and identifies nine facets, or areas, for job satisfaction: "pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication" (Spector, 1985, 1997, p. 8).

Many potential factors have been found to impact job satisfaction. Differences in overall job satisfaction have been found among people who vary in age, gender, race, and country of residence. Factors in the work environment, including coworkers, the physical job environment, and how well the job duties fit with the person, can impact satisfaction. Job stress, level of autonomy, schedules, and workload also impact satisfaction (Spector, 1997). People with high levels of impostor phenomenon may feel like their abilities do not align well with their job duties, and therefore experience decreased job satisfaction.

Effects of job satisfaction on job performance and overall well-being have been explored. A positive correlation has been found between job satisfaction and performance, although causality cannot be determined. High levels of reported job satisfaction correlated with increased intention to stay in a job in general populations (Spector, 1985) and RDNs (Mortensen et al., 2002; Sauer et al., 2012). People with low job satisfaction are more likely to experience burnout, counterproductive behaviors, and

job turnover (Spector, 1997). In Canadian dietitians, high levels of burnout and lack of feeling valued were identified as barriers to precepting (Nasser et al., 2014); however, job satisfaction and satisfaction with the role as a preceptor were not researched.

A handful of studies have explored job satisfaction in Registered Dietitian Nutritionists, most using the Job Satisfaction Survey, indicating that dietitians are generally satisfied with their work (Mortensen et al., 2002; Sauer et al., 2010). Higher overall satisfaction has been seen in those with management responsibilities (Sauer et al., 2010), greater professional development involvement (Mortensen et al., 2002), and entering the career with a graduate degree (Abad-Jorge & Butcher, 2016). Low pay and inadequate compensation are major contributors to job dissatisfaction among dietitians (Sauer et al., 2012). The relationship between job satisfaction and precepting is unexplored. Additionally, no known studies have examined job satisfaction in RDNs since the beginning of the COVID-19 pandemic.

Career Construction Theory

Career construction theory seeks to explain how intrapersonal and interpersonal characteristics help people form their careers. Building on Super's life span-life space development theory that states that people move through logical stages from career decision making to establishment and eventual decline (Savickas, 2005, p. 41), career construction theory looks at factors shaping the what, why, and how of career behaviors of job seeking, maintenance, advancement, and transitions. This theory states that while we do not create reality, we create meaning and representations of reality from life experiences. Career construction theory has sixteen propositions, nine of which link to concepts relating to impostor phenomenon and job satisfaction. Career construction

theory explores how personality, self-concept, adaptability, and life experiences help to mold the career attainments of people (Savickas, 2005). In dietetics, precepting of students is often done by professionals who are not directly employed by the educational programs. Thus, people who choose to precept must align their individual career self-concept, experiences, and personality to the role of being a preceptor.

Problem Statement

The need for preceptors in the field of dietetics exceeds the willing and able supply (Bergman, 2013; Caldwell-Freeman & Mitchell, 2000; Connor, 2015b, 2015a; Crayton, E, 2016; Wolf & Robinson, 2002). Without a complete overhaul of dietetics education, preceptors remain a pivotal piece. Securing preceptors for supervised practice experience is time consuming and an ongoing challenge for educational program administrators and students. Without an adequate preceptor base, programs could lose accreditation and students lose opportunities to continue on the pathway to becoming RDNs.

While the projected growth of the profession is on par with the average for all professions (U.S. Bureau of Labor Statistics, 2022), it can be expected that over 20% of credentialed professionals will age out of the workforce over the next 10 years (Dosedel, 2021). This will not only increase the number of people who need to be trained in the field, but also place more of the responsibility for educating future professionals on younger and less experienced RDNs.

RDNs with limited experience may perceive higher levels of impostor phenomenon, worrying that people will find out that they are a fake, fraud, or not as competent as others perceive them to be (Clance & Imes, 1978). In an effort to hide the

belief that they are less competent than others, they may be less likely to volunteer to serve as a preceptor. Additionally, as they hide their perceived incompetence, they may feel increased levels of stress and burnout, common barriers to precepting (Nasser et al., 2014), and job dissatisfaction (Spector, 1997). Increased job dissatisfaction may further decrease the desire to be a preceptor. Career construction theory can be used to examine how people develop their occupational attitudes and behaviors including the decision to precept future colleagues. When career-related beliefs and attitudes hold people back from serving as a preceptor, it reduces the number of students that dietetic education programs can serve, thereby creating additional constraints on educational programs and a barrier to entry to the profession.

Purpose of the Study

Investigating impostor phenomenon as a factor in job satisfaction may provide insight on why some people choose to serve as preceptors while others do not. The purpose of this dissertation is to conduct exploratory research examining the potential relationships among impostor phenomenon, job satisfaction, and precepting dietetic students. Minimal research has examined these topics within the dietetics profession. This study, which examines impostor phenomenon in dietitians and dietetic preceptors, may help to inform strategies to decrease these feelings within professionals. Alternatively, it may expose areas that were incorrectly thought to contribute to the lack of available preceptors. Lastly, findings on job and role satisfaction may help to highlight areas of improvement that could lead to better preceptor retention.

Rationale and Significance

Job satisfaction of subgroups of RDNs have been completed periodically as far back as the late 1970s (Agriesti-Johnson & Broski, 1982; Calbeck et al., 1979; Dalton et al., 1993; Mortensen et al., 2002; Sauer et al., 2012; Sims & Khan, 1986); however, none have looked at a relationship with impostor phenomenon. Additionally, there are no known studies of job satisfaction within preceptors. Only two known studies explored impostor phenomenon in dietitians (Hernandez & Lopez, 2023; Landry et al., 2022). Researchers have explored the benefits and barriers of precepting as well as perceptions of the roles of a preceptor; however, no published studies were identified reporting confidence in the role of preceptor.

Dietetics education hinges on the willingness and availability of a competent, volunteer preceptor base. Securing adequate numbers of preceptors has been a problem for multiple decades. Educational programs are often not the employer of the preceptors; instead, preceptors work for an unrelated organization. The role of the preceptor is generally in addition to typical work expectations and is often not a requirement of workplace administrators or stated explicitly within the job description. Dietetics programs that provide supervised practice experiences cannot increase enrollment without these preceptors. As a result, educational programs must identify and address motivational factors that keep dietetics professionals satisfied and engaged with the educational system after they become RDNs. Reported feelings of impostor phenomenon and job satisfaction have not been explored in relationship to serving in the role of a preceptor. Having a clearer understanding of the impact of impostor phenomenon on job satisfaction and serving as a preceptor can help inform interventions aimed at young

professionals to increase the preceptor base, which may help relieve one constraint on dietetics program administrators. This study addresses that gap in knowledge.

Definition of Terms

Commission on Dietetic Registration: the accrediting body for the Registered Dietitian/ Registered Dietitian Nutritionist credential (Commission on Dietetic Registration, n.d.-b). This organization develops and administers the registration examination and maintenance requirements for credentialed nutrition professionals.

Gender: the Merriam-Webster dictionary defines gender as "sex" and "the behavioral, cultural, or psychological traits typically associated with one sex" (*Definition of GENDER*, 2023). It additionally identifies that when studying gender and sexuality, it is preferred to use *sex* to identify biological traits and *gender* to describe cultural and behavioral traits, while acknowledging that historically the two terms have been used synonymously. In reviewing the literature, biological descriptors of *male* and *female* have been labeled *gender*, and only two published studies provided any gender identity categories other than biological sex. The term gender in this study will be used for both biological and gender identity to remain consistent with terminology used in the published literature that was reviewed.

Impostor phenomenon: the feeling of being a fake or a fraud or not deserving successes and accomplishments (Clance & Imes, 1978). In this study, impostor phenomenon is measured with the Clance Impostor Phenomenon Scale (Clance, n.d.). This scale is a 20-question inventory exploring attitudes and beliefs toward success and achievements, including feeling like a fraud, discounting positive feedback, and/ or believing that luck played a role in their accomplishments.

Job satisfaction: how much a person likes or dislikes their job. In this study, job satisfaction is measured with two tools: 1 - the Spector Job Satisfaction Survey (JSS) (Spector, 1985, 1997), which identifies nine areas of satisfaction: a – benefits, b – communication, c – contingent rewards, d - coworkers, e – nature of work, f – operating procedures, g – pay, h – promotion, and i – supervision; and 2 – the Michigan Organizational Assessment Questionnaire (MOAQ) (Spector, n.d.-b, 1997), which measures overall job satisfaction.

Mentor: "a person who gives a younger or less experienced person help or advice over a period of time, especially at work or school" or "a person with experience in a job who supports and advises someone with less experience to help them develop in their work" (Cambridge Dictionary, n.d.).

Preceptor: within the nutrition and dietetics profession, "a practitioner who serves as faculty for students/ interns during supervised practice by overseeing practical experiences, providing one-on-one training, and modeling professional behaviors and values" (Commission on Dietetic Registration, n.d.-a, para. 4).

Registered Dietitian/ Registered Dietitian Nutritionist (RDN): food and nutrition professionals who have completed accredited didactic and supervised practice educational programs, pass the Registration Examination for Dietitian Nutritionists, complete continuing education requirements, and paid the fees required to maintain the credential (Commission on Dietetic Registration, n.d.-e). People who meet the requirements may use either Registered Dietitian or Registered Dietitian Nutritionist to describe their credential.

CHAPTER II

LITERATURE REVIEW

Dietetics education programs seek to educate students who desire to be food and nutrition professionals and include both didactic and supervised practice experience components. Supervised practice placements are limited by the number of willing and able professionals who give their time to teach and mentor students. The purpose of this chapter is to explore literature describing potential factors impacting practicing professionals' willingness to provide such experiences and their satisfaction in the role. Specifically, this literature review has been organized to guide the reader through topics that may be limiting professionals' decisions to precept students, including (a) perceptions of precepting dietetic students, (b) career construction theory, (c) impostor phenomenon, (d) job satisfaction, and (e) an overview of variables explored in impostor phenomenon and job satisfaction research.

The Field of Dietetics

The term dietetics appears to have first been defined in 1839 in a medical science dictionary (Academy of Nutrition and Dietetics, n.d.-b). While the 1839 version of the dictionary is not readily available, the 1856 version defines dietetics as "a branch of medicine, comprising the rules to be followed for preventing, relieving, or curing disease by diet" (Dunglison, 1856, p. 292). It also defines "dietetitists" as "physicians who apply only the rules of dietetics to the treatment of disease" (Dunglison, 1856, p. 292). Currently in the United States, credentialed experts in food and nutrition are called Registered Dietitians or Registered Dietitian Nutritionists (RDNs) (Commission on Dietetic Registration, n.d.-e).

As of 2021, there were 119,249 RDNs (Commission on Dietetic Registration, n.d.-c). The Commission on Dietetic Registration provides some basic demographics on students and RDNs based on cross-sectional survey data (Table 1).

Table 1.

Selected Demographic Characteristics of Students and Professionals Surveyed for 2020 Needs Satisfaction Survey.

Characteristic	Students	Professionals
Population, n	15,769	119,249
Sex, female, %	89	92
Age, y		
Mean	29.1	45.1
≥55 y, %	2	29
<35 y, %	77	31
Race and ethnicity, %		
White	72	80
Hispanic or Latino	10	6
Black or African American	7	3
Asian	6	5
Other	3	2
No answer	2	3

From: Commission on Dietetic Registration. (n.d.-c). *Academy/ Commission on Dietetic Registration Demographics*.

Prior to 2024, a bachelor's degree with additional supervised practice was the minimum educational requirement (Accreditation Council for Education in Nutrition and Dietetics, n.d.-a); however, in the 2021 Compensation and Benefits Survey, 50% reported having a master's degree and 4% a doctorate (Academy of Nutrition and Dietetics, 2021). Years of work experience were diverse, with 10% having less than three years in the field, 30% having 3-9 years, 24% having 10-19, and 36% having 20+ years.

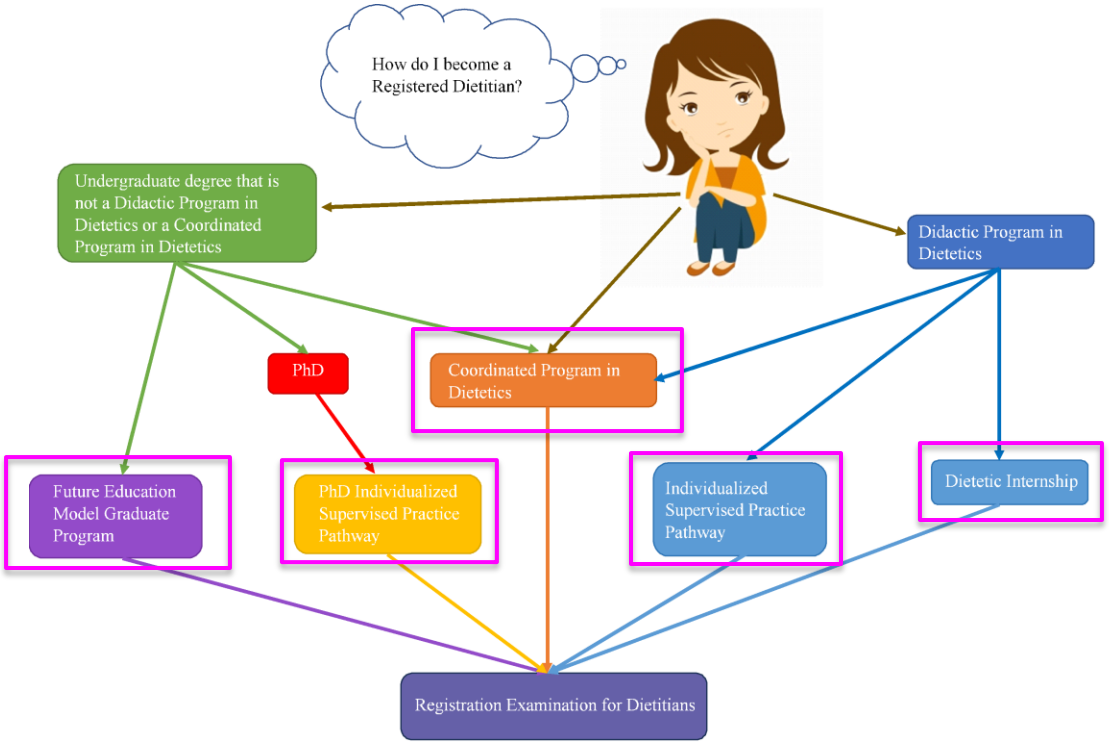
There are multiple educational pathways that one could take on the journey to becoming a Registered Dietitian Nutritionist (Figure 1). Although the specific requirements have changed over time, the general concept of the baccalaureate degree followed by supervised practice has been in place since the 1920s (Accreditation Council for Education in Nutrition and Dietetics, 2020). Regardless of which route a student takes, supervised training with RDNs or other qualified professionals is an obligatory piece of the educational program. All dietetics students are required to complete a minimum of 1000 hours of supervised practical education before earning eligibility to take the national credentialing examination.

The Accreditation Council for Education in Nutrition and Dietetics defines a preceptor as "a practitioner who serves as faculty for students/ interns during supervised practice by overseeing practical experiences, providing one-on-one training, and modeling professional behaviors and values" (Commission on Dietetic Registration, n.d.-a, para. 4). Precepting is an essential component of educational programs for dietitians and other healthcare professionals. However, obtaining an adequate number of preceptors has been a long-standing challenge for dietetics education programs (Bergman, 2013;

Caldwell-Freeman & Mitchell, 2000; Connor, 2015b, 2015a; Crayton, E, 2016; Wolf & Robinson, 2002). This preceptor shortage limits the number of students who can successfully progress towards eligibility to sit for the Registered Dietitian Nutritionist credentialing examination.

Figure 1.

Pathways to Becoming a Registered Dietitian in the United States



Program = Program type that requires students to complete supervised practice, usually with volunteer preceptors.

Perceptions of Precepting Dietetic Students

The biannual compensation and benefits survey of the profession collects multiple demographic data, including employment status, sector, practice area, and number of

employees supervised; however, it does not inquire about serving as a preceptor within established occupational roles (Academy of Nutrition and Dietetics, 2021). Multiple studies have explored RDNs' perceptions of the role of a preceptor (AbuSabha, et al., 2018; Hernandez et al., in press; Nasser et al., 2014; Wilson, 2002; Winham et al., 2014). One study identified that the preceptor provided multiple functions: teacher (i.e., teach basic subject matter concepts), preceptor-teacher (i.e., assess intern's prior content knowledge), preceptor (i.e., suggest useful learning experience to help intern achieve objectives), preceptor-mentor (i.e., assume intern has necessary content knowledge), and mentor (i.e., focus on intern's personal development) (Wilson, 2002), with over 80% of survey respondents indicating that they had a good or excellent understanding of the multiple roles of precepting despite receiving minimal formal training for the tasks.

Researchers explored the perceptions of precepting among Canadian dietitians (Nasser et al., 2014). In Canada, similar to the United States, students must complete an accredited degree plus supervised practice (*Dietitians of Canada - Become a Dietitian*, n.d.). Most respondents indicated lack of time and employer support as barriers to precepting. Additional barriers included experiencing burnout and lacking recognition for their efforts. Almost half of respondents indicated that they were not trained in being a preceptor, and over 80% of respondents requested more training in the evaluation of students.

As previously identified by AbuSabha et al. (2018), clinical placements are often the hardest for dietetics programs to obtain. A study of clinical dietitian in the United States examined the perceived benefits, barriers (Hernandez et al., in press), responsibilities, and self-confidence in precepting responsibilities (Hernandez et al.,

n.d.). Self-confidence scores were not significantly different between preceptors and non-preceptors; however, significant differences were found between those who are and are not required to precept for their jobs, as well as those who would or would not quit precepting if given the opportunity. A significant difference in self-confidence was found based on years as a dietitian and years as a preceptor. People with zero to two (0-2) years as a dietitian were significantly less confident in their precepting skills than those with three to five (3-5) years' experience, 21-30 years' experience, and >30 years' experience. People who indicated never precepting in a clinical environment were significantly less confident than people who had precepted for at least three years.

These differences in self-scored confidence raised new questions about impostor phenomenon and its potential impact on job satisfaction and the decision to precept. Dietitians who were required to precept but would not serve in this role if it were not required for their jobs reported less confidence in precepting compared to those who indicated an intent to continue precepting (Hernandez et al., n.d.). Other research showed that within a sample of undergraduate students, feelings of imposterism had an inverse relationship with self-confidence (Leary et al., 2000). Impostor phenomenon is not merely an indicator of lack of confidence, but a fear of being found out to be a fraud or incompetent (Clance & Imes, 1978). Perhaps those who would prefer not to precept students lacked confidence and had a fear of being exposed as a fraud, which decreased their satisfaction in their job and role as a preceptor.

Demand for dietetics preceptors exceeds the supply. Without a complete overhaul of dietetics education, preceptors remain a pivotal piece in the development of new professionals. Precepting dietetic students is often a voluntary for dietitians, with many

people having the freedom to decide if they want to add this responsibility to their workload. Identifying factors that positively or negatively correlate with satisfaction in the role of a preceptor can help dietetic program faculty and administrators promote and support this essential function. Career construction theory can be used to examine how people develop their occupational attitudes and behaviors.

Career Construction Theory

Career construction theory aims to explain how people form their career decisions. This theory builds on Super's lifespan theory (Table 2) that indicates people make a logical career progression through career exploration, establishment, maintenance, and decline (Duggar, 2016, p. 41). Savickas (2005) expanded on this by

Table 2.

Developmental Stages and Characteristics in Super's Lifespan Theory

Stage	Ages	Characteristics
Growth	Birth – 14	Developing self-concept and attitudes toward work.
Exploration	15 – 24	Discovering potential career areas through classes, hobbies, jobs, and activities.
Establishment	25 – 44	Developing and enhancing career-related skills.
Maintenance	45 – 64	Sustain career trajectory and potentially seek advancement.
Decline	65 +	Decrease workload and plan for retirement.

From: Duggar, S. M. (2016). Foundations of Career Counseling: A Case-Based Approach (1st ed.).

exploring how career self-concept and adaptability impact job satisfaction and career growth. Career construction theory aims to incorporate individual personality differences, abilities, motivations, and coping strategies into career trajectory. While taking into consideration individual differences and experiences, meaning is created that guides career construction.

Career construction theory has 16 central propositions (Savickas, 2005):

1. *Traditional societal roles, as well as those internalized by a person, shape career decisions, and stepping away from these roles causes strain*. Most dietitians historically have been and continue to be women. However, some people may believe that leadership and management positions are masculine roles and may feel uncomfortable stepping into jobs in these areas.
2. *Career and occupation have a strong impact on personality and self-image for many people*.
3. *The level of career attainment is a result of a combination of socioeconomic status, educational experiences, ability, personality, adaptability, and self-concept*. Career self-concept may be hindered in people who believe they do not deserve their achievements or feel like a fraud, and this may reduce overall career attainment. People with these feelings may be reluctant to gain attention or seek out promotions, decline to become preceptors, or feel less satisfied in the role of a preceptor.
4. *People differ in those areas, and therefore people do not all have identical career attainment*.
5. *Each job has different characteristics, making them better for certain people*

than others. The role of the preceptor involves multiple roles, including teaching and mentoring, in addition to usual job tasks for the person (Wilson, 2002). Some people may not be well suited to juggling these varied roles at the same time.

6. *An individual is typically capable of doing a variety of jobs and occupations*.
7. *Success depends on the fit of job duties with individual characteristics*. Some people may have talents, experiences, and personality characteristics that align better with mentoring and teaching students than others. Additionally, preceptors must be adaptable to situations that may arise while precepting that would not happen if students were not present.
8. *Work satisfaction is directly related to how much and how well people are able to align with occupational self-concept*. The constant feeling of not deserving their success or feeling like a fraud (Clance & Imes, 1978) can alter career self-concept and may lead to decreased job satisfaction as well as satisfaction with the role of being a preceptor.
9. *Career construction occurs when people integrate their self-concept into their work.*
10. *Work self-concept is believed to be stable beginning in adolescence; however, changes can occur with changes in living and job situations*. Some dietitians may feel competent and confident in their day-to-day role as a dietitian but not have a strong self-concept in the mentoring and teaching roles of a preceptor. A change in job situation that thrusts the RDN into a preceptor role may decrease overall work self-concept and role satisfaction.
11. *Career construction follows Super's maxicycles of establishment, maintenance,*

and decline. Younger dietitians and those newer to the profession who are still in the establishment phase of career progression may feel less confident in the role as a preceptor.

12. *Minicycles can occur when a job transition occurs*. Just as newer dietitians may have a lower career self-concept, those who change jobs or practice areas may go through a period of time similar to career establishment and feel less confident in their job role. This lowered confidence may translate to lowered self-concept related to training dietetic students in their area of practice.
13. *Vocational maturity occurs as people progress through these stages at an expected rate*.
14. *Career adaptability explores a person's ability and resources for coping with expected challenges in career development*. People with impostor phenomenon use a variety of positive and negative coping mechanisms (Gardner et al., 2019; Vergauwe et al., 2015). Without adequate resources and support, people may not want to take on additional challenges of precepting.
15. *Career construction and development occurs as people respond to life changes*.
16. *Conversations around these topics, including adaptability and validating career self-concept, help to inform career decisions*. Impostor phenomenon is believed to be self-perpetuating and psychotherapy has been used to combat beliefs (Clance & Imes, 1978). Others have found that social support and mentors can help to decrease the feeling of being an impostor (Gardner et al., 2019; Neureiter & Traut-Mattausch, 2016; Vergauwe et al., 2015). Having professional support, including discussing challenges as a preceptor and self-concept about work roles,

may help dietitians to feel more confident in precepting.

Utilizing career construction theory, we may explore how self-concept and job satisfaction impact career decision making. A career self-concept that does not align with job duties could decrease overall job satisfaction and cause practitioners to be less willing to supervise students. One construct that can greatly impact career self-concept is impostor phenomenon. If impostor phenomenon is altering career self-concept, job satisfaction, and willingness to precept students, understanding the intersectionality of these relationships may be an essential starting point to develop interventions to increase the dietetics preceptor base and ease constraints on dietetics programs.

Impostor Phenomenon

In the late 1970s, impostor phenomenon was identified in a group of over 150 women who had been awarded PhDs and achieved high levels of success in their careers (Clance & Imes, 1978). These women had earned praise and respect from colleagues; however, they felt unworthy of the accolades. The women in this sample expressed that they had reached their current employment level either through some sort of luck or trickery and they often feared that they would be found to be a fraud. Researchers initially stated that impostor phenomenon was self-perpetuating, with sufferers often refuting external efforts to combat the feelings of impostorism. Repeat successes were not enough to convince people suffering from impostor phenomenon that they were innately capable. The benchmark report on impostor phenomenon compiled data on a variety of women with different levels of education (all at least some college) and occupations. The majority of women surveyed were non-Hispanic White, at least middle-class, and aged 20 to 45 years. These women indicated frequent feelings of poor self-

confidence, anxiety, depression, and high self-imposed standards. The authors stated that women generally attribute achievement to luck or hard work and not actual ability, while attributing failures to lack of ability.

Two basic childhood experiences were prevalent among women with impostor phenomenon (Clance & Imes, 1978). One group of people had a sibling who was considered the smart one. These people spent their childhood and adolescence attempting to live up to the sibling and prove their worth to the family, never gaining the acceptance or acknowledgement that they sought. They may have begun to believe that they were not that smart after all but achieved successes through association with the sibling or use of their social skills to charm their way to success. The second group of people were nurtured and praised as children. These people were led to believe that there was nothing they could not do, and usually those early successes were quite easy. As they grew older and experienced actual challenges, people in this group felt like they had to live up to the belief that they could indeed do anything with ease. This group may experience anxiety in difficult situations. They may work extra hard to prove that they are good enough. Regardless of which group a person with impostor phenomenon falls into, it is generally social expectations – whether internal or external – at the root of the issue.

Clance and Imes (1978) believed impostor phenomenon is self-perpetuating and used psychotherapy to combat the faulty beliefs. They identified four main behaviors that should be addressed in people with high levels of impostor phenomenon. One behavior involves excessive working or studying in order to achieve more and hide perceived deficits. The extra effort is not perceived as personal ability; rather success is attributed only to the excess work. Another behavior of those with impostor phenomenon is their

ability to read a situation and provide teachers and supervisors with the answers they feel that person wants to hear. As a result, they begin to believe that their own ideas do not have merit and they only found success due to regurgitating what others want to hear. A related behavior is people who use their charisma to find a mentor, and then learn and use details about the interests of the mentor to be considered intelligent. This is self-defeating, as the person then feels bad about the need for external validation instead of intrinsic value. A societal issue contributing to impostor phenomenon is the pervasive attitudes that boys are smarter than girls and confident, brilliant women are a threat to the status quo. Many women may downplay their intelligence in order to avoid harassment and societal rejection.

Methods of reversing these behaviors in women with high levels of impostor phenomenon included group psychotherapy and small doses of homework (Clance & Imes, 1978). Clance and Imes found that in an individual setting, the person was so convinced of the beliefs that they were difficult to change. In a group setting, people were more receptive to identifying false beliefs and narratives in others, and that could open the door to conversations about their own beliefs. A group setting could also help participants see that they were not alone in their experiences. Beneficial homework assignments included asking participants to keep a log of positive feedback, openly and honestly share thoughts and ideas, and find mentors who would authentically support them.

Langford and Clance (1993) identified the main goal of psychotherapy for impostor phenomenon is to decrease the need for external validation and increase one's sense of self-worth. Tips were provided regarding the role of the therapist. Features of

childhood, including constantly seeking praise but not receiving it, were hallmarks of early impostors, and an identified task of therapy was to unpack adverse childhood events. Another topic of interest was failure: exploring the perceived versus actual consequences of failure and separating self-worth from individual failings.

Multiple methods for identifying impostor phenomenon were developed, including the Perceived Fraudulence Scale, Harvey Impostor Phenomenon Scale, and Clance Impostor Phenomenon Scale. Initial work with the Harvey Impostor Phenomenon Scale indicated good reliability and validity data; however, later research was unable to replicate the initial high internal consistency and found difficulty differentiating impostors from non-impostors. The Clance Impostor Phenomenon Scale was developed to address identified issues with the Harvey Impostor Phenomenon Scale (Chrisman et al., 1995).

The Clance Impostor Phenomenon Scale is a 20-item tool used to identify key features of impostorism, including fears of being unable to repeat achievements and being less capable than others. Chrisman et al. (1995) compared the Clance Impostor Phenomenon Scale with the 51-item Perceived Fraudulence Scale. Internal consistency was similar between the two scales ($\alpha = .92$ vs. $\alpha = .94$). The two scales were significantly correlated with one another as well as with measures of depression, self-esteem, anxiety, and self-monitoring. These authors additionally completed factor analysis of the scale, identifying three factors: fake, discount, and luck. Based on this evaluation, the Clance Impostor Phenomenon Scale, while shorter in length, was considered a valid measure.

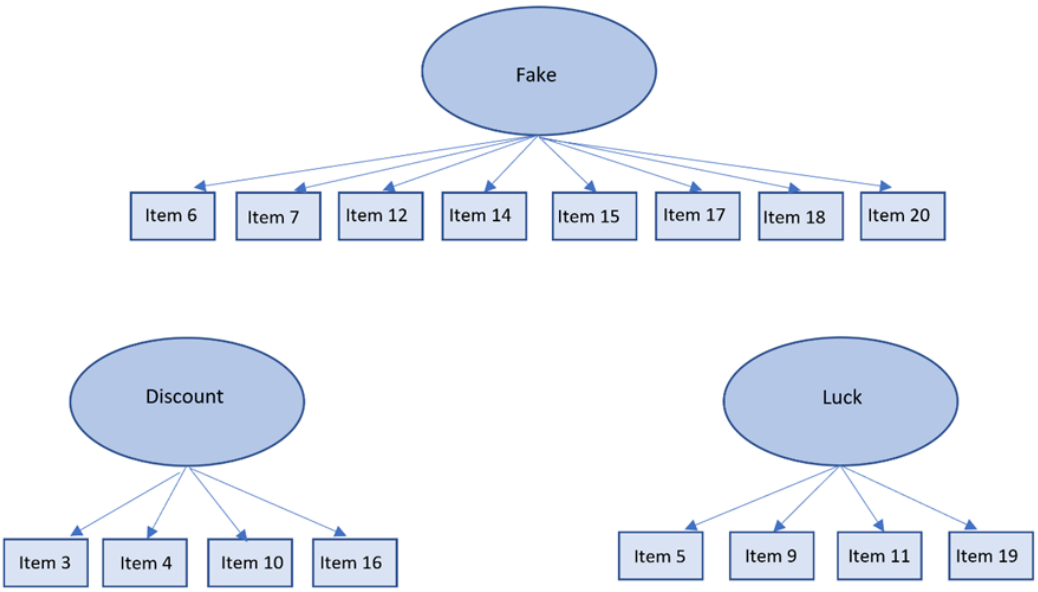
While a “gold standard” measurement has not been identified, several studies have used the Clance Impostor Phenomenon Scale (Clance, n.d.), including both studies in RDNs (Hernandez & Lopez, 2023; Landry et al., 2022), and studies involving medical doctors and residents (Kamarzarrin et al., 2013; Oriel et al., 2004), physician assistant graduates (Prata & Gietzen, 2007), university students and working adults in Germany (Neureiter & Traut-Mattausch, 2016), working adults in Belgium (Vergauwe et al., 2015), and students and faculty in academia (Hutchins, 2015; Leary et al., 2000). Validation studies have been conducted on this scale, supporting its use (Brauer & Wolf, 2016; Chrisman et al., 1995). Dr. Clance indicated that impostor phenomenon is a self-perpetuating condition requiring psychotherapy to treat, and early studies indicated stability of responses when using this tool (Chrisman et al., 1995; Clance & Imes, 1978).

A few researchers have completed factor analysis testing on the Clance Impostor Phenomenon Scale yielding one-, two-, and three-factor models. Similar to Chrisman et al. (1995), Brauer and Wolf (2016) identified a three-factor model, with factors loading as indicated in Figure 2. Items 1, 2, 8, and 13 were removed from analysis because of low inter-item correlations, yielding a 16-item scale. Early confirmatory factor analysis using the 16-item version of the Clance Impostor Phenomenon Scale indicated high correlation between fake and discount, resulting in collapsing them into one factor, yielding a two-factor model. Thirteen items loaded to the new fake/ discount factor, and three items loaded to luck; however, the items were numbered differently from the original Clance Impostor Phenomenon Scale and were not listed in the manuscript, making for difficult comparisons (French et al., 2008). Another research group completed confirmatory factor analysis of the 16-item modified scale, finding a poor fit for the three-factor model

and identifying a stronger fit for a one-factor model, with all items loading to the single factor of impostor phenomenon (Jöstl et al., 2012).

Figure 2.

Three-Factor Model of the Modified Clance Impostor Phenomenon Scale



When considering the validity of the decision, some debate exists on the interpretation of the tool. Clance (n.d.) initially proposed four categories; however, others have considered those values arbitrary (Bravata et al., 2020; Vergauwe et al., 2015). Holmes et al. (1993) searched for a cut point that would minimize both false positives and false negatives. A score of 62 was determined to be the best differentiator between impostors and non-impostors.

Impostor phenomenon has become a hot topic in lay literature, with a recent systematic review of the topic finding over 2300 articles published on the internet in the

one-year period of March 28, 2018 – March 28, 2019; however, the empirical research on the topic is lacking (Bravata et al., 2020). This review explored prevalence, predictors, and interventions in peer-reviewed literature between the years of 1990 and 2018 and identified 62 research studies. Over half of these studies evaluated impostor phenomenon in students, ranging from elementary school to graduate students, while 19 explored employed professionals. A few key similarities were found among the studies evaluating students. Students with higher levels of impostor phenomenon were more likely to be pessimistic, perfectionistic, attempt to hide imperfections from others, and have low self-esteem. High school students with impostor phenomenon reported higher rates of suicidal ideation and attempts. Students with higher levels of social support had less impostor feelings. There was no relationship between academic grades and impostor phenomenon.

Studies among employed professionals included doctors, nurses, teachers, accountants, and managers (Bravata et al., 2020). Like students, professionals who experienced impostor phenomenon tended to have low self-esteem. Additionally, they had higher levels of stress, burnout, and fear of failure and success, with simultaneous reductions in job satisfaction, career planning, desire for leadership and advancement, and overall job performance. Additional negative characteristics, including depression, anxiety, and social dysfunction, correlate with impostor phenomenon in students and employed professionals.

Predictors of impostor phenomenon were challenging to pinpoint with current empirical literature (Bravata et al., 2020). Of the 33 studies that considered gender, approximately half identified higher rates of impostorism in women than men, and just under half found no differences by gender. Researchers in two different studies found a

difference by gender among students but not professionals. No studies attempted to dig deeper into findings related to gender. The lack of differences in impostor phenomenon scores between men and women may be threefold. More women may now work in high-powered roles that were traditionally held by men than in 1978. Additionally, selection bias could have occurred in early studies conducted among women due to an increased ability to reach out to Dr. Clance for help. Lastly, an overall cultural shift that allows men to feel more comfortable admitting their insecurities may negate any differences between men's and women's scores.

Only six studies were found that assessed age and impostor phenomenon (Bravata et al., 2020). Half of those found no effects related to age, where two studies found that impostorism declined with age. One found no effect of age among students, but a decline in impostor phenomenon with age among professionals. Since the age range of students tends to be narrower than that of working professionals, it is not surprising that an effect was not identified among students.

None of the studies explored in the systematic review included an evaluation of treatment methods or modalities for impostor phenomenon (Bravata et al., 2020). This may be a direct result of impostor phenomenon not being classified as a psychiatric diagnosis. It was recommended that sufferers be screened for depression and anxiety and reassured that they are not the only ones with those feelings. However, at this time, there are no reports available of interventions for students or professionals to decrease the feelings of impostorism and the subsequent effects of poor job performance, satisfaction, stress, and burnout.

A study conducted among 238 undergraduate students sought to identify how impostor feelings are publicly and privately expressed (Leary et al., 2000). Two types of impostors were identified: *true impostors*, who reflect the historically outlined definition of impostor phenomenon (i.e., afraid of being found a fraud), and *strategic impostors*, who work to lower others' expectations of them. Regardless of the type of impostor, this study found that people with high levels of impostor phenomenon indicated more pessimism and lower self-confidence than those with low levels.

In people with high levels of impostor phenomenon, self-confidence in their abilities was rated higher when participants did not expect to be publicly evaluated and it was rated lower when they knew their evaluation would be seen by others (Leary et al., 2000). When people serve as a preceptor, they are evaluated in multiple ways: by the students who work with the preceptor, by the program to determine the appropriateness of the experience for students, and by the preceptor's employer. People who score high in impostorism may choose to not serve as a preceptor to reduce the number of opportunities for external evaluation.

Impostor Phenomenon and Healthcare Professionals

Several opinions and commentaries have been written about impostor phenomenon seen within various health care professions. A letter to the editor of the *American Journal of Pharmaceutical Education* described the likelihood of impostor phenomenon in pharmacy students, of whom 62.5% are female (Panjwani & Karpen, 2019). The authors pointed out that a lack of confidence in abilities can influence patient care. The author of a commentary piece in *Nurse Leader* described some nurses in leadership positions feeling like they had to repeatedly defend their positions and others

with traditional feelings of not deserving their success (Robinson-Walker, 2011). Impostor phenomenon has been identified in physicians, including emergency medicine doctors (Borhart, 2015) and medical interns (Ramsey & Spencer, 2019). At this time, two studies examining impostor phenomenon in dietitians have been identified (Hernandez & Lopez, 2023; Landry et al., 2022).

In 2004, researchers examined impostor phenomenon, anxiety, and depression among family medicine residents (Oriel et al., 2004). Every family medicine resident in Wisconsin (n = 194) was mailed a survey composed of multiple validated tools: the Clance Impostor Phenomenon Scale, State Anxiety Scale, Trait Anxiety Scale, and the Rosenberg Self-Esteem Scale. Approximately one-third of participants scored in a manner that indicated impostor phenomenon. High scores on the impostor phenomenon scale correlated with higher depression and anxiety, and lower self-esteem and perceptions of being appropriately prepared for practice in family medicine. Impostor phenomenon did not significantly differ by age, marital status, or years of residency. Based on these self-reported data, a large percentage of family medicine residents in Wisconsin were struggling with their professional self-image (Oriel et al., 2004). The implications of this study suggest that students and early-career practitioners need to be made aware that they are not the only ones experiencing feelings of inadequacy, and that educators and medical supervisors should do more to assist students transitioning into professional life, including sharing their own experiences with doubt and concerns about patient management decisions and outcomes, to help decrease feelings of inadequacy in the professional environment.

Other researchers examined self-esteem and impostor phenomenon in a sample of 65 practicing physicians (46% female) in Rasht, Iran (Kamarzarrin et al., 2013). The survey tools consisted of the Cooper-Smith Self-esteem Test and the Clance Impostor Phenomenon Scale. Results indicated a significant correlation between self-esteem and impostor phenomenon, but no significant difference in impostor phenomenon between men and women. This finding is contrary to earlier studies, such as those by Clance & Imes (1978), who indicated that impostor phenomenon was most prevalent in women. However, Kamarzarrin et al. (2013) researched a small sample taken from a specific subset of people (practicing physicians in one city in Iran), and therefore was not generalizable to a broader healthcare population. It does, however, indicate the need to explore the link between reduced self-confidence and impostor phenomenon among other professionals.

Another group explored the prevalence of impostor phenomenon in 83 physician assistant students and graduates from the Pacific University School of Physician Assistant Studies (Prata & Gietzen, 2007). The research team emailed the Clance Impostor Phenomenon Scale to all physician assistant students and graduates in the five-year period of 2001 to 2006. Almost 50% of female respondents and almost 25% of male respondents indicated impostor phenomenon, with scores decreasing as more time elapsed from completion of the program. This study produced findings similar to previous studies showing that impostor phenomenon was higher among female health professionals. They also found that feelings of impostor phenomenon decrease over time, contrary to Clance and Imes's (1978) assertions that impostor phenomenon self-perpetuates. Prata and Gietzen (2007) described the possibility that impostor

phenomenon could have multiple types, including a form they called transient, or temporary. Similar to Oriel et al. (2004), it was felt that in an effort to combat feelings of inadequacy in their roles as young professionals, students and graduates should be made aware that feelings of impostor phenomenon are normal.

Nursing, much like dietetics, has several pathways to registration and professional license. One pathway for nursing is that students who have a prior bachelor's degree may complete Graduate Entry Nursing programs. Researchers completed a pilot study with 27 English students at the end of their Graduate Entry Nursing program (Aubeeluck et al., 2016). The Clance Impostor Phenomenon Scale was provided to students as part of the exit data collected by the program. Seventy percent of respondents indicated impostor phenomenon. The researchers also observed high levels of fear, anxiety, and depression in these students. These feelings of impostor phenomenon may be a natural part of the transition process from student to practitioner, much like the transient impostor phenomenon hypothesized by Prata and Gietzen (2007), or be due to the accelerated nature of the program that allows students with a pre-existing bachelor degree to earn a nursing credential. However, this cross-sectional study was limited to one group of graduates right before program completion. No follow up was conducted with the nursing graduates to determine if impostor phenomenon decreased over time.

Only two known studies have explored impostor phenomenon among dietitians (Hernandez & Lopez, 2023; Landry et al., 2022). The first study used snowball sampling to identify prevalence and predictors of impostor phenomenon in dietitians and dietetic students (Landry et al., 2022). The Clance Impostor Phenomenon Scale, short-form Minnesota Satisfaction Questionnaire, and Well-Being Index were used to assess

variables. Additionally, respondents were asked about social media use and comparisons to other nutrition professionals on social media.

As would be expected in a sample of dietitians and dietetic students, the majority of respondents were non-Hispanic White women (Landry et al., 2022). This sample had a high proportion of young respondents, with most between the ages of 25 and 34 years. Using the published scoring for the Clance Impostor Phenomenon Scale (Clance, n.d.), 21% of respondents reported intense impostor phenomenon experiences, 43% frequent impostor phenomenon, 28% moderate, and 8% few impostor phenomenon experiences. Impostor phenomenon decreased with age, and students had the highest levels. Overall, feelings of impostorism were more prevalent in this sample than in other healthcare professionals. While medical advancements have increased the depth and breadth of expected knowledge for all healthcare practitioners, entry-level dietitians are expected to master not only medical care of patients, but also food science, food service management, and community and government programs related to nutrition. Having surface level knowledge of many topics may lead nutrition students and early career dietitians to feel inadequate compared to more experienced practitioners.

The Academy of Nutrition and Dietetics has special interest and practice groups called Member Interest Groups and Dietetic Practice Groups. These groups are made up of smaller segments of dietetics professionals with similar characteristics or interests and often provide opportunities for continuing education, networking and mentorship (Academy of Nutrition and Dietetics, n.d.-c, n.d.-e). Participants who indicated membership in at least one of these groups reported lower levels of impostorism than those who were not part of these groups (Landry et al., 2022). Additionally, lower use of

social media and comparisons with others correlated with lower levels of impostor phenomenon. Having a mentor has been correlated with lower impostor phenomenon in multiple studies on other professionals (Gardner et al., 2019; Neureiter & Traut-Mattausch, 2016; Vergauwe et al., 2015) and comparisons with peers has been found to be a negative correlate of impostorism (Gardner et al., 2019).

When looking at the Well-Being Index, the mean score of dietitian and dietetic student respondents indicated higher likelihood of fatigue, burnout, suicidal ideation, and poor quality of life (Landry et al., 2022). While these attributes have been commonly seen among people with impostor phenomenon, it is also important to note that the data for this study were collected during the COVID-19 pandemic, which could have contributed to poorer well-being scores. With currently available evidence, it is not possible to say if well-being influences impostorism or if impostorism influences well-being.

Hernandez and Lopez (2023) explored impostor phenomenon in a random sample of Registered Dietitian Nutritionists. Similar to the profession of dietetics in general (Commission on Dietetic Registration, n.d.-c) and Landry et al., (2022), the sample was predominantly non-Hispanic White women. Among the entire sample (Hernandez & Lopez, 2023), 76% reported at least moderate impostor feelings. Despite impostor phenomenon being identified as a condition found in highly achieving women, in this sample no significant differences were found among people with different levels of education; however, no participants with a doctorate reported intense impostor phenomenon. As mentioned previously, there are many steps and achievements necessary

to become a dietitian and all credentialed dietitians can be considered high achieving regardless of the highest level of education.

Some differences in feelings of impostorism were noted based on years of experience (Hernandez & Lopez, 2023). No one with 15 or more years of experience, regardless of degree, reported intense impostor phenomenon. Among those with less than three years' experience, frequent impostor feelings – the third highest category out of four – was most prevalent. For those with three to 39 years' experience, moderate impostor phenomenon was most common. The category of few impostor characteristics was only prevalent among those with 40 or more years' experience.

Impostor phenomenon scores were not as high in Hernandez and Lopez's (2023) study as in Landry et al.'s (2022) study. Six (6) percent of Hernandez and Lopez's (2023) sample reported intense impostor phenomenon experiences, 26% frequent impostor feelings, 45% moderate impostor phenomenon feelings, and 23% few impostor characteristics. The difference in distribution of scores may be attributed to the samples: Landry et al. (2022) included students and practitioners whereas Hernandez and Lopez (2023) focused on credentialed practitioners only. In total, 77% of the sample of practicing dietitians surveyed by Hernandez and Lopez reported moderate to intense feelings of impostor phenomenon.

Impostor Phenomenon in Educators

When looking at factors impacting the decision to precept students, it is important to consider the role of the preceptor as an educator as well as a healthcare provider. Dietetics preceptors work with post-baccalaureate and graduate students and act as an extension of department faculty. Research on impostor phenomenon in higher education

faculty members indicates that people with greater impostor feelings may be hesitant to work with students and answer questions (Zorn, 2005) – both essential components of precepting dietetics students. It was additionally proposed that faculty members with high levels of impostorism pass along those feelings to students, increasing and perpetuating impostorism. Fields of study where mentoring between faculty and students is more common appear to lead to higher graduation rates; however, nothing is reported about how mentoring impacts feelings of impostorism.

A large study with over 1000 participants explored impostor phenomenon among women in academia, including graduate students, faculty, and administrators (Vaughn et al., 2020). Within the entire sample, 94.8% of participants reported at least moderate impostor feelings, with only 5.2% indicating few impostor feelings. The mean IP score of 66.84 indicates frequent impostor characteristics, the second highest category. Tenured faculty had significantly lower scores than both master's and doctoral students, which may indicate that impostor feelings decline with years of experience within the field. Despite those statistical differences, the overall scores were high in all but 5% of respondents. Considering that the profession of dietetics is dominated by women and many dietetic preceptors are working in a role as auxiliary faculty, it is predicted that impostor phenomenon rates would be high within a sample of RDNs, as previously seen with Landry et al. (2022) and Hernandez and Lopez (2023).

In a study of 112 tenure-line faculty at an Alaskan university, impostor phenomenon was assessed in conjunction with the number of students advised, faculty comfort with advising responsibilities, and student evaluations of faculty (Brems et al., 1994). When faculty members reported low perceived levels of impostorism, they were

more likely to enjoy the role as a mentor to students. Additionally, if the faculty reported higher levels of self-esteem and realism in self-evaluation, they advised and mentored more students than other faculty members. The authors did acknowledge that their study was correlational and other variables could be at play. This preliminary research indicates that people with higher levels of impostor phenomenon may be less likely to work with students or to mentor fewer students. This could impact dietetics programs as people who experience impostorism and are not required by their jobs to precept may be less willing to volunteer to guide the next generation of nutrition professionals.

Another study of faculty members explored impostor phenomenon in conjunction with emotional exhaustion and coping mechanisms (Hutchins, 2015). The breakdown of impostor categories was not provided in this report – only that the mean impostor phenomenon level of 57.5 was toward the high end of the range for moderate impostor feelings. Impostorism was lower in tenured faculty compared to levels present in non-tenure and tenure-track faculty, which could be a reflection of higher feelings of job security or more years of experience in higher education. This study confirmed that individuals with greater emotional exhaustion had increased impostor phenomenon scores. Emotional exhaustion is frequently seen in conjunction with poor job satisfaction and distancing oneself from work. In the current shortage of dietetic preceptors, emotional exhaustion may lead people to avoid volunteering with educational programs.

Impostor phenomenon is prevalent in high achieving professionals, including people in most health care professions and higher education. While Clance and Imes (1978) indicated that impostor phenomenon was self-perpetuating, Prata and Gietzen (2007) purported that these feelings decreased over time. If it is possible to reduce

impostor phenomenon, it could be advantageous for educational programs to find ways to facilitate a change. However, before we can set out to reduce impostor feelings, we need a stronger picture of impostor phenomenon in Registered Dietitian Nutritionists and its potential role in the preceptor shortage.

While adverse effects on professional practice have not been specifically researched, other studies have shown maladaptive perfectionism, stress, burnout, and poor job performance and satisfaction. They also show less career striving and decreased desire for leadership (Bravata et al., 2020). People who battle maladaptive perfectionism are overly critical, which may impair decision-making in complex situations. Practitioners may be less willing to question the status quo and explore innovative solutions to problems. Professionals who are stressed and/or experiencing burnout may be less conscientious and more likely to make mistakes or provide subpar care to patients and clients. The lack of desire for leadership roles, whether formal or informal, could keep people from reaching their full career potential, which can also negatively impact job satisfaction.

According to the career construction theory, career self-concept is important to career attainment and satisfaction (Savickas, 2005). Some people have either an unclear or faulty self-concept (Busacca, 2007). Social expectations, such as one's upbringing as being either perpetually second-best or always striving for perfection (Clance & Imes, 1978), greatly impacts how a person formulates their self-concept into their career. A lack of career confidence can lead to career inhibition, decreasing the likelihood that people will seek out additional opportunities either within their current role or in a new position or organization (Busacca, 2007). Misalignment with self-concept and a lack of

desire to increase career attainment can then lead to poor job satisfaction (Busacca, 2007; Savickas, 2005). It is possible that these career inhibitions may also discourage people from seeking to serve as preceptors, increasing the educational burden on dietetics programs.

Job Satisfaction

On the surface, job satisfaction seems simple: it is defined as how much someone likes their job. Thousands of studies have been completed on various facets of job satisfaction in a variety of settings, mostly evaluating job satisfaction in terms of the attitude of the respondent. The majority of studies researched job satisfaction and job conditions in industrial organizations (Spector, 1985, 1997). Commonly cited components of job satisfaction include pay, benefits, the organization overall, organizational policies and procedures, job conditions, nature of the job, opportunities for promotion, supervisors, coworkers, recognition, communication, appreciation, security, and personal growth. Each component adds to the overall picture of job satisfaction but they are only moderately correlated with one another (Spector, 1997).

Job satisfaction is heavily researched due to the impact of satisfaction on both employers and employees (Spector, 1997). It is generally believed that satisfied employees are productive employees. There is a small correlation between these two concepts; however, causality cannot be determined with the current data. Like job performance, organizational citizenship behavior, or the willingness to pitch in and help others, correlates with job satisfaction. Low job satisfaction correlates with negative effects including withdrawal behaviors, burnout, and job turnover. Withdrawal can be a consequence of burnout. Burnout and poor satisfaction may also be linked to

physiological and psychological symptoms, including anxiety, depression, headache, and gastrointestinal distress.

Multiple methods of evaluating job satisfaction have been developed. The Job Descriptive Index (JDI) is a 72-question measure used in over 100 published studies (Spector, 1997). It assesses five components (work, pay, promotion, supervision, and coworkers) with either nine or 18 questions per subscale. Limitations of this scale include its length and applicability to a variety of employment groups. The Job In General Scale is an 18-item measure of overall job satisfaction designed to accompany the facets of the JDI. No facets can be evaluated individually with the Job In General tool (Ironson et al., 1989).

The Minnesota Satisfaction Questionnaire (MSQ) has two forms, each evaluating 20 total facets of job satisfaction (Spector, 1997). The short form has 20 questions; the long form contains 100 questions, with five for each facet. The short form does not appear adequate for studies assessing individual facets. If satisfaction in various components of job satisfaction is of interest, the long form is recommended; however, many facets are highly correlated with one another, bringing into question if each of the 20 facets is actually unique.

The Job Diagnostic Survey (JDS) sought to evaluate job characteristics, such as job tasks and duties, personality, feelings and beliefs, motivation, and reactions to the job (Spector, 1997). Job satisfaction is a component of the section on reactions to the job.

The shortest measure of overall job satisfaction is the Michigan Organizational Assessment Questionnaire (MOAQ) (Bowling & Hammond, 2008; Spector, 1997). It contains only three questions, making it a simple measure for evaluating overall job

satisfaction if individual components are not of concern. As such, it assesses global, or overall job satisfaction. It has been found to be reliable and have both construct and face validity when considering the emotional component of job satisfaction (Bowling & Hammond, 2008). This tool had a positive correlation with many aspects of job satisfaction, including the nature of the work, supervision, coworkers, pay, promotion, organizational commitment, and continuance commitment (the intention to remain in a specific role or position).

In a meta-analysis of studies using the MOAQ, it was found that various researchers used 5-, 6-, or 7-point scales (Bowling & Hammond, 2008). Norms based on each scale of the tool were developed (Table 3). No cut-points were provided for classification of satisfaction versus dissatisfaction with one's job.

Table 3.

Normative Data for the Michigan Organizational Assessment Questionnaire Job Satisfaction Measure

MOAQ-JSS	*k*	*N*	Un-weighted *M*	Unweighted *SD*
5-point	18	7135	3.93	0.83
6-point	8	1865	4.70	1.20
7-point	36	15,234	5.48	1.31

Note. MOAQ-JSS, Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale; k, number of samples; N, total sample size.

From: Bowling, N. A., & Hammond, G. D. (2008). A meta-analytic examination of the construct validity of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale. *Journal of Vocational Behavior*

The Spector Job Satisfaction Survey (JSS) was developed specifically to assess job satisfaction in human services employment (Spector, 1985). Additionally, the research team wanted a scale that would measure common subsets of job satisfaction that were unique from one another. The final tool contained 36 items measuring nine facets of job satisfaction (pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication) and an overall satisfaction score. Reliability assessment of the JSS involved comparing it to the MSQ and other established tools for assessing job satisfaction. The tool was validated with employees in a variety of health settings, including community health centers, a mental health hospital, and a health department. Employees included healthcare providers as well as support

staff. High internal validity was found, and norms (Table 4) were available for comparison among groups (Spector, 1985, 1997). The JSS has been used to evaluate job satisfaction among dietitians (Abad-Jorge & Butcher, 2016; Gardner et al., 2019; Sauer et al., 2012; Talenfeld & Enrione, 2015).

Table 4.

Job Satisfaction Survey Norms for Total American and Medical Samples

	Total American[a]		Medical[b]	
Facet	Mean	Standard Deviation	Mean	Standard Deviation
Salary	12.3	2.4	12.4	2.4
Promotion	12.1	1.8	11.8	2.0
Supervision	18.8	1.7	18.2	2.1
Benefits	14.6	2.1	14.1	2.4
Contingent Rewards	13.8	1.8	13.5	2.3
Conditions	13.5	2.0	13.3	2.3
Coworkers	17.9	1.4	17.5	2.0
Work Itself	18.9	1.8	19.1	2.1
Communication	14.5	1.9	15.0	2.2
Total	138.0	21.6	134.3	14.8

From (Spector, n.d.-a)

[a]Number of samples = 146, Total sample size = 36280.

[b]American medical samples, mainly nurses and technicians. Number of samples = 27, Total sample size = 3523.

In career construction theory, job satisfaction is an effect of adaptability, which involves synthesizing personality, values, goals, and preferences with coping skills for job tasks, transitions, and traumas (Savickas, 2005; Xie et al., 2016). A person who is adaptable is more likely to express satisfaction in various aspects of the job. They are also more likely to demonstrate career striving and leave a position that is unsatisfactory. However, if a person does not have good career self-concept or adaptability, they may be less likely to leave an unpleasant situation.

Job Satisfaction in Registered Dietitians

Job satisfaction studies in dietitians date from the 1970s. An early study used the JDI to compare job satisfaction between 323 dietitians and non-professional foodservice workers (Calbeck et al., 1979). In this study, dietitians generally had a high level of overall job satisfaction, and notably higher satisfaction related to the work itself, pay, and coworkers than non-professional workers. Overall, a high percentage of respondents were satisfied with pay except for those with five to 10 years of experience. Newer dietitians were less satisfied with the level of supervision than those with more experience. Overall, the respondents were unsatisfied with opportunities for advancement.

Building on the work by Myrtle (1978) and Calbeck et al. (1979), a nationwide survey of dietitians explored job satisfaction using the JDI (Agriesti-Johnson & Broski, 1982). A stratified random sample of members of the American Dietetic Association (now called the Academy of Nutrition and Dietetics) was selected, aiming to obtain at least 100 participants from each of the following practice areas: clinical, generalist, community/ public health, consultant, administrative, administrative – head of department, other/ private practice, and teacher. Respondents were overwhelmingly

women (98%), over half (55%) were under 35 years of age, and nearly three-quarters (72%) were employed full time. Salaries ranged from less than $6000 per year to more than $30,000 per year. The majority earned between $14,000 and $25,000 annually. Adjusted from 1980 dollars, this would roughly equate to a buying power of $50,890 to $90,874 in 2022 (*Calculate the Value of $14,000 in 1980. How Much Is It Worth Today?*, n.d.).

Mean JDI scores were lower than the norms for the instrument, indicating an overall moderate level of satisfaction among respondents (Agriesti-Johnson & Broski, 1982). No significant differences were found based on age, type of position, years in role, or full- versus part-time employment. Respondents reported higher satisfaction with their supervisors and lowest scores for advancement opportunities. Generalist dietitians, typically those whose job roles do not fit neatly into other distinct categories (clinical, community/ public health, administrative), scored lowest of all groups in total satisfaction, nature of work, and supervision; however, they reported the third highest level of satisfaction with pay. Despite the higher score relative to other respondents, the mean score of 28.13 was barely above a neutral rating on the JDI.

Due to problematic turnover and job vacancy, job satisfaction was explored in 409 dietitians working in clinical, community, and long-term care settings in New York City (Dalton et al., 1993). Demographics related to age, gender, years in practice, full- versus part-time employment, and salary were not reported. The JDI and Job in General tools were used to evaluate job satisfaction, with scores on the JDI below the 50th percentile for female norms. Of the dietitians working in clinical, community, and long-term are settings, consultant dietitians (typically not direct employees of the work site)

were most satisfied, and managers were more satisfied than non-managers. Satisfaction with pay and promotion opportunities was consistently low.

Sims and Khan (1986) explored job satisfaction among 483 public health nutritionists. As would be expected in a sample of dietitians, respondents were predominantly female. The mean age was 35 years, and they had been employed in public health nutrition for an average of six years. Eight components of job satisfaction were measured using a modified version of the Index of Organizational Reactions. The mean overall satisfaction was 3.31 out of five, indicating only moderate satisfaction. Respondents were most satisfied with the nature of their work and least satisfied with pay, especially compared to other health professionals. The combination of satisfaction with the type of work, pay, supervision, future career prospects, and working conditions explained 59% of the variance seen in job satisfaction.

In the early 2000s, job satisfaction in dietitians was explored by evaluating professional involvement (Mortensen et al., 2002). This study used the Index of Job Satisfaction and asked questions about professional memberships, participation in meetings, and utilization of professional development resources. The mean satisfaction score indicated that dietitians were generally satisfied with their jobs, and only 7% of the 1321 respondents indicated dissatisfaction. There was a positive relationship between professional involvement and job satisfaction. As compared to other studies that tend to look at factors in the work environment, this study indicated that professional involvement, a factor that could be controlled by the employee, may influence job satisfaction.

A 2012 study looked specifically at dietitians with financial and/or personnel management responsibilities (Sauer et al., 2012). In addition to the Job Satisfaction Survey (JSS), demographic data and intent to leave the job were assessed. Despite the strong correlation between job dissatisfaction and intent to leave found in other fields, this was the first study to examine this relationship in a sample of dietitians. Less than 5% of this sample reported job dissatisfaction. As in other studies, dietitians were most satisfied with the nature of their work, supervision, and coworkers. Fringe benefits was another area of high satisfaction. This sample was least satisfied with operating conditions. Management dietitians were generally satisfied with pay; however, people in these roles also tend to be in higher paid positions than other dietitians. Overall job satisfaction in this sample was higher than the norms for the JSS for multiple occupations as well as in health careers. Strong negative correlations existed between intent to leave and overall satisfaction, nature of work, and contingent rewards.

Job satisfaction was explored in 181 dietitians with specialty certification in renal nutrition (Goddard & Enrione, 2013). JSS scores indicated moderate satisfaction levels, with the lowest satisfaction related to pay. This study did not examine satisfaction in people holding other specialty credentials or compare satisfaction levels with people who do not have a specialty credential. Total satisfaction scores were not reported, limiting comparisons between this group and other groups of dietitians.

In a comparison of dietitians with and without a credential in nutrition support, overall JSS scores were not significantly different (Talenfeld & Enrione, 2015). Among the practitioners with specialty credentials, pay and years in practice were higher, along

with scores for personal satisfaction and training. Overall, it did not appear that this credential made a big impact on job satisfaction.

One study was found that explored the impact of educational level at entry to the profession (Abad-Jorge & Butcher, 2016). A survey containing the JSS, professional involvement, and demographic questions was sent to graduates of both non-degree dietetic internships and dietetic internships that culminated in a master's degree. In this small sample of 96 dietitians, 46% had a master's degree, 42% had a bachelor's degree, and 12% were enrolled in a master's degree program. Mean overall satisfaction scores and facet scores for fringe benefits and coworkers were higher for the group with the master's degree than for those who entered the profession with a bachelor degree. Overall satisfaction scores of those with master's degrees were similar to those in the previous study among dietitians with management responsibilities (Sauer et al., 2012).

The most recent study of job satisfaction in RDNs utilized the short form of the Minnesota Satisfaction Questionnaire (MSQ) (Landry et al., 2022). Data for this study were collected in 2021, amidst the COVID-19 pandemic. Results from this study indicated that RDNs were moderately satisfied with their jobs overall. As previously mentioned, specific facets of satisfaction cannot be isolated using this form.

Landry et al. (2022) additionally identified a statistically significant negative relationship between impostor phenomenon and job satisfaction. For every one unit increase in impostor phenomenon, job satisfaction decreased by 0.16 units. Only one other known study (Vergauwe et al., 2015) explored a relationship between impostor phenomenon and job satisfaction. This study of white-collar workers in Belgium also indicated a negative relationship between these two concepts. However, when accounting

for strong social support at work, including mentoring and social support from coworkers, impostor phenomenon did not have negative impacts on job satisfaction.

Job Satisfaction in Educators

A meta-analysis explored job satisfaction among school principals and teachers in Turkey (Polatcan & Cansoy, 2019). Major themes that predicted job satisfaction included transformational leadership behaviors of supervisors who provided quality feedback and motivated and inspired their employees, and the teachers' self-reported professional competence. When teachers had higher self-efficacy and higher perceived competence for achieving their educational goals, they reported higher job satisfaction. When teachers reported higher levels of perceived failure, they also indicated high levels of burnout and low levels of job satisfaction. While this study cannot be generalized to RDNs in the United States, it does seem worthwhile to explore if the sense of being a failure negatively impacts job satisfaction within RDNs and especially preceptors of dietetic students.

A dissertation exploring job satisfaction in 182 allied health faculty in the United States indicated that the top three areas of job satisfaction were the nature of the work, supervision, and coworkers (Risling-de Jong, 2019). This indicates that allied health faculty enjoy the tasks of their job as educators and likely receive adequate support from supervisors and coworkers. Faculty who reported less satisfaction with promotion, supervision, contingent rewards, operating conditions, coworkers, nature of work, and communication were more likely to report a desire to leave their position within the next year. While dietetics is an allied health field, dietetics educators were not surveyed in this research.

Career construction theory indicates that career decisions and advancement are dependent on multiple factors, including experiences, personality, adaptability, and self-concept. Adaptability generally requires resources for coping with life change, such as social support and mentoring. Changes in job situations can alter work self-concept (Savickas, 2005). When impostor phenomenon alters overall self-concept, career development and striving can be hindered. While job satisfaction (Agriesti-Johnson & Broski, 1982; Calbeck et al., 1979; Dalton et al., 1993; Mortensen et al., 2002; Sauer et al., 2012; Sims & Khan, 1986) and impostor phenomenon (Hernandez & Lopez, 2023; Landry et al., 2022) have been independently researched in dietitian populations, there is minimal research examining the relationship between the two in any population (Landry et al., 2022; Vergauwe et al., 2015). Additionally, it would be interesting to explore if a set of variables correlate with job satisfaction and satisfaction with precepting among Registered Dietitians in the US.

Variables in Job Satisfaction and Impostor Phenomenon Research

A variety of studies have looked, individually, at impostor phenomenon and job satisfaction among various populations. For some demographic variables, common themes can be identified; for others, there are some contradictory conclusions. This section explores findings across multiple studies looking for consensus and areas for further research.

Gender

Gender is a commonly collected demographic across research studies. Older studies have used biological sex as their classification of gender, with newer studies taking into consideration the growing acceptance of gender identity as a separate

construct (*Definition of GENDER*, 2023). In all but two of the studies examined (Hernandez & Lopez, 2023; Landry et al., 2022), gender was classified as either male or female (Abad-Jorge & Butcher, 2016; Agriesti-Johnson & Broski, 1982; Caselman et al., 2006; Castro et al., 2004; Chayer & Bouffard, 2010; Chrisman et al., 1995; Clance & Imes, 1978; Cowman & Ferrari, 2002; Cusack et al., 2013; Jöstl et al., 2012; Kamarzarrin et al., 2013; Leary et al., 2000; Mangum, 2018; McGregor et al., 2008; Oriel et al., 2004; Prata & Gietzen, 2007; Sauer et al., 2012; Vergauwe et al., 2015; Villwock et al., 2016; Winham et al., 2014). Impostor phenomenon was initially identified in women and thought to be more prevalent in women than men (Clance & Imes, 1978). Several studies have corroborated those findings, with higher levels of impostorism in women in family medicine residencies in Wisconsin (Oriel et al., 2004), physician assistant graduates in Oregon (Prata & Gietzen, 2007), doctoral students in Austria (Jöstl et al., 2012), medical students (Villwock et al., 2016) and college students (Cusack et al., 2013; Leary et al., 2000; McGregor et al., 2008). Other studies showed no differences by gender in impostor phenomenon among physicians in Iran (Kamarzarrin et al., 2013), white-collar workers in Belgium (Vergauwe et al., 2015), higher education faculty (Hutchins, 2015), graduate students (Castro et al., 2004; Mangum, 2018), undergraduate students (Cowman & Ferrari, 2002), fifth and sixth grade elementary school students (Chayer & Bouffard, 2010) and high school students (Caselman et al., 2006).

In exploration of job satisfaction, norms for the JSS were developed for the population in general but comparisons between men and women were not reported (Spector, n.d.-a, 1985). Most studies of job satisfaction among nutrition and dietetics professionals did not look at differences between men and women. One study of public

health nutrition professionals that did explore gender reported no differences (Sims & Khan, 1986).

The current population of dietitians is predominantly female (Table 1) (Commission on Dietetic Registration, n.d.-c). Utilizing a random sample of credentialed practitioners, it is unlikely that enough respondents will report a gender identity other than female to make meaningful decisions. As this research is still exploratory in nature, a random sample will provide a better picture of the average dietitian than a sample that includes oversampling of populations less represented in the profession.

Race/ Ethnicity

Race and/or ethnicity are also commonly collected demographic variables. Few non-White participants were included in studies validating the Clance Impostor Phenomenon Scale (Bravata et al., 2020), bringing the validity of its use in other populations into question. Two studies exploring impostor phenomenon in university students who self-identify as a member of a racial/ ethnic minority group found no significant differences in impostor phenomenon levels; however, they did not compare students in minority groups with non-Hispanic White students (Cokley et al., 2013, 2017). In a dissertation exploring 74 graduate students attending an Historically Black College and University, the only notable difference was that international students reported higher levels of impostorism than non-Hispanic White or Black/African-American respondents; however, that difference did not reach statistical significance (Mangum, 2018). In that same study, being non-Hispanic White was a significant predictor of impostor phenomenon. Another study of 213 graduate students found higher levels of impostor phenomenon in non-Hispanic White students as compared to

Black/African American students (Castro et al., 2004). Contrary to these findings, a study of 138 medical students found a non-significantly lower level of impostor phenomenon in non-Hispanic White and Asian American students as compared to all other ethnicities (Villwock et al., 2016).

No reviewed studies explored differences in job satisfaction based on race or ethnicity. As the profession of dietetics is composed of 80% non-Hispanic White women, (Commission on Dietetic Registration, n.d.-c) race/ ethnicity differences are unlikely to be seen in a random sample; however, with minimal data currently available on impostor phenomenon in RDNs, oversampling of less represented populations is outside of the scope of this project.

Age

Age has been strongly correlated with job satisfaction, with multiple studies showing that job satisfaction increases with age (Calbeck et al., 1979; Sims & Khan, 1986; Spector, 1985), and one study that found no differences (Agriesti-Johnson & Broski, 1982). The findings of increased job satisfaction with age align with Super's lifespan stages of career development (Table 2) that includes career establishment in early adulthood and maintenance in middle adulthood (Duggar, 2016, p. 41).

Age as an independent variable in impostor phenomenon is less conclusive. In health care professionals, age was reported in two studies. Among higher education faculty (Brems et al., 1994), family medicine residents (Oriel et al., 2004), and graduate students at an Historically Black College and University (Mangum, 2018), no significant differences were seen by age; however, in physician assistant graduates, impostor

phenomenon decreased with age (Prata & Gietzen, 2007). It is unknown if age alone is a meaningful predictor of impostor phenomenon in a broader group of professionals.

Years of Experience

Like age, years of work experience is strongly positively correlated with job satisfaction (Rehn et al., 1989; Sims & Khan, 1986). Super's lifespan theory states that after the maintenance stage comes a stage of decline as people near retirement (Duggar, 2016, p. 41). Aligning with that theory, one study showed an increase in job satisfaction as years of experience increased up until a maximum of 25 years after which there was a decline (Calbeck et al., 1979). As with age, only one study showed no differences in job satisfaction by years of experience as a dietitian (Agriesti-Johnson & Broski, 1982).

Similar to age, there are inconclusive data regarding impostor phenomenon and years of experience. Impostor phenomenon was initially believed to be self-perpetuating, with people denying or ignoring any evidence that refutes their beliefs (Clance & Imes, 1978). As evidenced in a study among medical residents, years of residency in family medicine did not impact levels of impostorism (Oriel et al., 2004); however, medical residents are early in their careers. Other studies have shown that among physician assistant graduates (Prata & Gietzen, 2007) and Registered Dietitian Nutritionists (Hernandez & Lopez, 2023), impostor phenomenon decreases with about three to five years of experience.

No known studies have looked specifically at impostor phenomenon and years in one's current position. Super's lifespan theory states that people go through mini-cycles of establishment and maintenance with a change in jobs (Duggar, 2016). One study of RDNs found no differences in job satisfaction based on years in the role (Agriesti-

Johnson & Broski, 1982). Another study found that job satisfaction was low in an area with high turnover (Dalton et al., 1993), which could indicate that frequent turnover leads to poor satisfaction or factors that lead to poor satisfaction increase turnover. It is yet to be seen if there is a difference in impostor phenomenon or job satisfaction when examining years in current position as opposed to simply assessing years in the field.

Annual Income

No known studies have explored impostor phenomenon and income in health care providers; however, dissatisfaction with pay is a common finding in job satisfaction research. Early studies of job satisfaction in nutrition professionals showed low levels of satisfaction with pay; however, actual incomes were not collected (Calbeck et al., 1979; Sims & Khan, 1986). Even when actual incomes were analyzed and job satisfaction was higher with higher pay, satisfaction with pay was still one of the lowest facets of job satisfaction (Rehn et al., 1989). The most satisfied dietitians were consultants and heads of departments (Agriesti-Johnson & Broski, 1982), which are roles that generally report higher pay and greater autonomy (Academy of Nutrition and Dietetics, 2021). People working in community nutrition, which is an area that commonly reports lower incomes, reported the lowest levels of pay satisfaction (Dalton et al., 1993).

In studies that collected and reported satisfaction and annual income levels, the higher paid dietitians were the most satisfied. Dietitians who made greater than $60,000 per year in 2002 (Mortensen et al., 2002) and $70,000 in 2012 (Sauer et al., 2012) were most satisfied. Those values equate to a 2022 buying power of $94,670 and $86,480, respectively (*Calculate the Value of $14,000 in 1980. How Much Is It Worth Today?*, n.d.), which is above the 75th percentile and almost at the 75th percentile, respectively, for

all dietitians in 2021 (Academy of Nutrition and Dietetics, 2021). While pay is a facet of job satisfaction that is commonly scored lower, nothing is known about the impact of pay on impostor phenomenon. However, exploring this relationship is outside of the scope of the current project.

Level in Organization

Level in the organization is well-researched in job satisfaction. Multiple studies have demonstrated a positive correlation between leadership roles and increased job satisfaction (Calbeck et al., 1979; Dalton et al., 1993; Mortensen et al., 2002; Rehn et al., 1989; Sauer et al., 2012; Sims & Khan, 1986). Only one study was unable to demonstrate a significant difference in job satisfaction based on level in the organization (Agriesti-Johnson & Broski, 1982).

The only known study to explore impostor phenomenon related to level in the organization looked at higher education faculty (Hutchins, 2015). Faculty with tenure reported lower impostor phenomenon scores than non-tenure and tenure-track faculty. This may indicate that greater job security lessens impostor feelings; however, other variables could be at play. Examining the level in the organization is outside of the scope of this project. Typically, people who are at a higher level in an organization are less likely to perform direct mentorship to students during their supervised practice experiences.

Hours Worked Per Week

Hours worked per week has not been reported in impostor phenomenon research; however, it has been explored in job satisfaction studies. Several studies have indicated no difference in job satisfaction between nutrition professionals with full- versus part-

time employment (Agriesti-Johnson & Broski, 1982; Rehn et al., 1989; Sims & Khan, 1986). However, a more recent study found greater satisfaction among respondents working full time (Mortensen et al., 2002).

Highest Degree Earned

Impostor phenomenon was initially identified as a condition of highly achieving women (Clance & Imes, 1978). Limited research has compared levels of impostor phenomenon among people with varying levels of education. One exploratory study of 266 dietitians (Hernandez & Lopez, 2023) indicated a high proportion of feelings of impostorism among credentialed practitioners with all levels of education - bachelor, master, and doctoral degrees. A counterintuitive finding was that while some RDNs with bachelor's and master's degrees reported the highest category of feelings of impostorism, no one with a doctoral degree did. These results have yet to be reproduced in a new sample of Registered Dietitians.

Limited research has examined job satisfaction by highest degree earned. One study indicated that Registered Dietitians had higher job satisfaction than non-professional foodservice workers (Calbeck et al., 1979). Considering that the job duties of a Registered Dietitian compared to a non-professional foodservice worker vary greatly, it is highly likely that the job satisfaction is related to the nature of the job rather than one's level of education. Another study compared graduates of non-degree-granting dietetic internships with those from combined master's degree dietetic internship programs (Abad-Jorge & Butcher, 2016). This study found that those entering the profession with a graduate degree had higher job satisfaction than those without a graduate degree. No studies have explored if there are differences in entry-level positions

secured by people entering the profession with a graduate degree compared to those without a graduate degree; however, this exploration is outside of the scope of this project.

Specialty Credential

Specialty credentials in nutrition and dietetics typically require multiple years of study and practice after becoming a Registered Dietitian, as well as passing of a specialty credential exam. This is a higher level of achievement than that of a generalist dietitian. Considering the initial beliefs surrounding impostor phenomenon (Clance & Imes, 1978), people who earn specialty credentials are more highly achieving than average and could put them at higher risk for impostor phenomenon. However, Prata and Gietzen (2007) indicated that with more experience impostor phenomenon decreases. No literature is currently available exploring a relationship between specialty credentials and impostor phenomenon in Registered Dietitians.

Exploratory research has been completed on job satisfaction in dietitians with specialty credentials. One study examined levels of satisfaction among people with the Certified Specialist in Renal Dietetics credential (Goddard & Enrione, 2013). Respondents reported moderate levels of job satisfaction, with greatest scores in the areas of personal satisfaction and standards of care, and lowest scores with satisfaction with pay. Dietitians with the credential were not compared to people without it or with those holding any other credential.

Another study compared dietitians with the Certified Nutrition Support Clinician designation with those without the specialty credential (Talenfeld & Enrione, 2015). There were no significant differences between the two groups for overall job satisfaction.

The only significant differences found were in the areas of personal and training satisfaction. At this time, not enough research is available to determine if achieving a specialty credential would impact overall job satisfaction or impostor phenomenon. Additionally, since specialty credentials are not required for general practice of the profession of dietetics nor to serve in the role as a preceptor, there may not be enough representation in a random sample of dietitians to make meaningful determinations.

Job Seeking

Many of the demographic variables examined in job satisfaction and impostor phenomenon research are outside of the control of the participant or researcher. However, the decision to seek out new employment is often within the control of the person. People with low job satisfaction are more inclined to seek new opportunities (Mortensen et al., 2002; Risling-de Jong, 2019; Sauer et al., 2012; Spector, 1985). Specifically among dietitians, intent to leave a current position was lowest when a person indicated high levels of satisfaction with contingent rewards and the type of work, as well as overall job satisfaction (Sauer et al., 2012). However, people with impostor phenomenon tend to be less likely to leave a secure position, potentially due to fear of the unknown or that future colleagues would identify the person as an impostor or fraud (Vergauwe et al., 2015). This connection between impostor phenomenon and intent to leave has yet to be explored among dietitians. While this is an intriguing area for future research, job seeking behaviors may not have a direct impact on satisfaction with the role of the preceptor and are therefore outside the scope of the current project.

Having a Mentor

The relationship between having a mentor and job satisfaction has been minimally researched. One study explicitly found that having a mentor early in the dietitian's career was associated with higher job satisfaction (Mortensen et al., 2002).

In a study among accounting students, positive and negative coping methods for impostor phenomenon were explored (Gardner et al., 2019). One positive coping mechanism was seeking and receiving social support from outside of the peer group. Seeking social support from within the peer group worsened feelings of impostor phenomenon, but seeking support from outside of immediate peers was negatively associated with the construct. This indicates that support from people who are not actively in the same academic and career stage may help students gain confidence as well as a more realistic view of their capabilities and progress in professional development. Another study in Israeli executives indicated that executive coaching was a useful tool for coping with impostor feelings (Kuna, 2019).

In a study of higher education faculty, mentoring was a common coping strategy for impostor feelings, but no direct relationship between mentoring and imposter phenomenon scores was discussed – only that tenured faculty, who tended to have less impostor feelings, reported more mentoring (Hutchins, 2015). It has been recommended that orientation programs for higher education faculty and staff include peer group formation and creating opportunities for mentorship (Parkman, 2016). Mentorship does not have to come from direct, one-on-one interaction. Mentorship can come from indirect sources, such as reading books and listening to podcasts. While social media is not exactly social support, many people today turn to social media for advice,

encouragement, and validation. However, Landry et al. (2022) reported that RDNs who used social media more frequently had worsened feelings of impostor phenomenon.

A study of white-collar workers in Belgium explored impostor phenomenon and job satisfaction across multiple sectors (Vergauwe et al., 2015). Researchers used 16 of the 20 Clance Impostor Phenomenon Scale items, rejecting four items due to low inter-item reliability. They identified a score of 50 out of 80 as indicating impostorism. Job satisfaction was evaluated using the Michigan Organizational Assessment Questionnaire and social support through the Mentoring and Communication Support Scale. In this group, people with higher impostor phenomenon and lower social support from colleagues, for job tasks, career mentoring, or coaching had both lower job satisfaction and commitment to the organization. However, when social support in these areas was higher, the negative relationships between impostor phenomenon and job satisfaction disappeared. If utilizing a professional mentor is confirmed to be positively associated with job satisfaction and/or negatively associated with impostor phenomenon it could lead to an intervention.

Summary

Career construction theory indicates that career decisions and advancement are dependent on multiple factors, including experiences, personality, adaptability, and self-concept. Adaptability generally requires resources for coping with life change, such as social support and mentoring. Changes in job situations can alter work self-concept (Savickas, 2005). When impostor phenomenon alters overall self-concept, career development and striving may be hindered. While job satisfaction (Agriesti-Johnson & Broski, 1982; Calbeck et al., 1979; Dalton et al., 1993; Mortensen et al., 2002; Sauer et

al., 2012; Sims & Khan, 1986) and impostor phenomenon (Hernandez & Lopez, 2023) have been independently researched in dietitian populations, only one known study examined the relationship between the two (Landry et al., 2022).

While the concept of impostor phenomenon has existed for over 40 years (Clance & Imes, 1978) and is currently a hot topic in popular media, empirical research on the topic is lacking (Bravata et al., 2020). Prevalence of impostor phenomenon in RDNs has only recently begun to be explored (Hernandez & Lopez, 2023; Landry et al., 2022). Landry et al. (2022) identified higher levels of impostorism among dietitians than other health professionals and a link between impostor phenomenon and job satisfaction; however, no studies exist exploring the impacts of impostor phenomenon on satisfaction with the role of a preceptor.

Early interventions against impostor phenomenon included individual and group psychotherapy (Clance & Imes, 1978). Minimal subsequent research has been published in an attempt to reduce impostor feelings (Bravata et al., 2020). Cross-sectional research indicates that having a mentor reduces the likelihood of impostor phenomenon (Gardner et al., 2019; Landry et al., 2022; Neureiter & Traut-Mattausch, 2016; Vergauwe et al., 2015). However, it is unknown if having a mentor decreases impostor feelings in RDNs and preceptors of dietetic students, or how mentoring may impact the effect of impostor phenomenon on job satisfaction.

The two studies conducted among RDNs (Hernandez & Lopez, 2023; Landry et al., 2022) provided preliminary prevalence data for impostor phenomenon, as well as factors that correlate with impostorism including age, years of experience, membership in academy practice groups, job satisfaction, and social media use. However, gaps in the

literature still exist. While total years of experience as an RDN was explored, years in the current job or practice area may be a better correlate if respondents have changed positions or practice areas. Landry et al. (2022) explored membership in Academy of Nutrition and Dietetics groups; however, that is not a direct indicator of mentorship within the profession. In addition, the job satisfaction measure utilized by Landry et al. (2022) cannot provide information about satisfaction in specific facets of job satisfaction and does not have comparative norms for healthcare or human services employees. Finally, impostor phenomenon may have a complicated relationship with job satisfaction such that people who are dissatisfied are more likely to seek new employment. However, people with impostorism may be afraid to leave the comfort of a known position (Mortensen et al., 2002; Neureiter & Traut-Mattausch, 2016; Vergauwe et al., 2015). There is currently no known information on the relationship between impostor phenomenon and satisfaction with one's role as a preceptor. Additionally, there are no known reports of interventions to decrease impostor phenomenon in nutrition professionals.

This study addresses several gaps in the literature. Specifically, it aims to identify if a relationship exists between impostor phenomenon and job satisfaction, as well as satisfaction with the role of a preceptor. Demographic variables, Clance Impostor Phenomenon Scale scores, and Spector's Job Satisfaction Survey scores were evaluated in a cross-section of RDNs. Michigan Organizational Assessment Questionnaire scores were collected from all participants and compared with total JSS scores for assessment of overall satisfaction of RDNs. For those who indicated serving as a preceptor, a modified version of the MOAQ was used to assess satisfaction specifically with the role as a

preceptor. Years of experience, years in one's current practice area, and having a mentor were covariates when examining job satisfaction and satisfaction with being a preceptor.

This study adds to the information currently available about impostor phenomenon and job satisfaction that could potentially be exacerbating the dietetic preceptor shortage. Due to the use of cross-sectional data, correlations may be established but causes of the preceptor shortage cannot be determined. Results of this study may highlight areas for further research or interventions to increase preceptor satisfaction, decrease the preceptor shortage, and reduce the administrative burden on educational programs providing supervised practice experiences.

CHAPTER III

METHODOLOGY

The purpose of this study was to explore factors that impact satisfaction of Registered Dietitian Nutritionists with their jobs and with the role of a dietetics preceptor. Preceptors have long been a limiting factor in dietetics education (Bergman, 2013; Caldwell-Freeman & Mitchell, 2000; Connor, 2015a, 2015b; Roofe & Landry, 2018; Wolf & Robinson, 2002) and multiple studies have examined preceptors' perceptions of the role requirements, as well as benefits and barriers to serving in this way (AbuSabha, et al., 2018; Hernandez et al., in press; Nasser et al., 2014; Wilson, 2002; Winham et al., 2014). Few studies have examined a relationship between impostor phenomenon and job satisfaction in any field (Landry et al., 2022; Vergauwe et al., 2015), and no identified studies have explored a link related to the role of precepting students. One major question with three sub-questions framed this study. These questions guided the selection of the research design, collection and analysis of data, and the findings of the study. These questions were:

RQ: Do years of experience, years in practice area, years in current position, age, having a mentor, and total impostor phenomenon score correlate with a RDN's job satisfaction and satisfaction with the role of preceptor?

SQ1: How prevalent is impostor phenomenon among RDNs and preceptors of dietetic students?

SQ2: Do scores on the Michigan Organizational Assessment Questionnaire correlate with the Spector Job Satisfaction Survey scores in RDNs?

SQ3: How satisfied are RDNs with their jobs and with the role of preceptor?

This chapter reports on the methodology for this study. It describes the research design, population and sample, procedures used for data collection, measures and instruments used, and data analysis techniques used.

Research Design

A cross-sectional, online survey design was used to collect data for quantitative analysis. This study design allows for the collection of data at a single time point and is useful for population studies and determining prevalence data (Setia, 2016). Cross-sectional design typically allows for faster data collection and development of inferences that can be used to inform an intervention. Cross-sectional data does not allow for the identification of causal relationships. It can also introduce bias, as people who are more interested in the topic are more likely to respond than others. This topic remains exploratory in nature. Gathering information from a large group of nutrition professionals adds validity to inferences about impostor phenomenon and job satisfaction and informing decisions for future interventions.

Sample

The population of interest for this study was Registered Dietitian Nutritionists, including both those who did and did not precept dietetic students. Having a clearer understanding of the impact of impostor phenomenon on job satisfaction, the satisfaction with the role as a preceptor, and the impact of mentorship on those relationships can help inform interventions aimed at nutrition professionals.

A list of email addresses for 10,000 credentialed professionals was obtained from the Academy of Nutrition and Dietetics and Commission on Dietetic Registration (CDR) (Academy of Nutrition and Dietetics, n.d.-g). This list of professionals was a random selection representing almost 10% of credentialed professionals (Commission on Dietetic Registration, n.d.-c). Despite being a random selection of names and email addresses, selection bias can still play a role as invited participants can decide whether to participate. Use of the random mailing list provided a cross-section of currently credentialed RDNs and allowed for calculation of a response rate.

An a priori analysis was conducted using G*Power version 3.1.9.7 (Faul et al., 2007) to determine the minimum sample size required to test the research questions. Results indicated that the required sample size to achieve 80% power for detecting a medium effect at a significance of $\alpha = .05$ was $N = 98$ for correlation with six predictors. For chi square goodness of fit with degrees of freedom = 18, minimum sample size was $N = 224$. Minimum sample size to calculate differences between means was $N = 278$, with 139 per group. Therefore, a minimum sample size of 278 was sought.

Data Collection Procedures

IRB approval was obtained due to the use of human subjects and collection of sensitive information for this research study (Appendix A). Validated survey tools were distributed, including the Clance Impostor Phenomenon Scale (Clance, n.d.), Spector Job Satisfaction Survey (Spector, 1985, 1997), and Michigan Organizational Assessment Questionnaire (Bowling & Hammond, 2008; Spector, n.d.-b). Appendix B details permission to use the Clance Impostor Phenomenon Scale and Appendix C details permission to use the Spector Job Satisfaction Survey. No permission is required to use

the Michigan Organizational Assessment Questionnaire (Kiefer, n.d., p. 73). Demographic questions were modeled after a large national survey of nutrition professionals (Academy of Nutrition and Dietetics, 2021). The survey questions (Appendix D) were entered into Qualtrics ® (Provo, UT) for ease of distribution, collection, and data transfer to the most recent version of IBM SPSS Statistics (Armonk, NY). The invitation to participate in the study was sent via email from the Academy of Nutrition and Dietetics marketing team with one reminder email sent. To encourage participation, survey respondents were offered the opportunity to opt into a drawing for one of eight $25 Amazon gift cards.

Measures

Demographics

Demographic data were collected to compare the sample with known information from the Academy of Nutrition and Dietetics (Academy of Nutrition and Dietetics, 2021) and previous studies (Agriesti-Johnson & Broski, 1982; Calbeck et al., 1979; Hernandez & Lopez, 2023; Landry et al., 2022; Mortensen et al., 2002; Sauer et al., 2012; Sims & Khan, 1986). The Compensation and Benefits Survey of the Dietetics Profession (Academy of Nutrition and Dietetics, 2021) is one of the most widely distributed cross-sectional surveys within the population of interest for the current study; therefore, the most recently published version was used for the wording of responses to several demographic variables in the current study, including gender identity, race/ethnicity, highest degree earned, and current practice area. Additionally, respondents were asked about their experience as a preceptor and with having a mentor. Table 5 provides a summary of variables and the response choices for categorical variables.

Table 5.

Summary of Variables Collected, Categorical Code Values, Variable Labels and Usage

Variable	Type	Code Value	Variable Label	Usage
Gender identity	Categorical	0	Woman	Comparison to national data and previous studies
		1	Man	
		2	Trans man	
		3	Trans woman	
		4	None of the above/ prefer not to answer	
Race/ethnicity	Categorical	0	Hispanic, Latino or Spanish origin	Comparison to national data and previous studies
		1	White	
		2	Black or African American	
		3	Asian	

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Race/ethnicity, cont.		4	American Indian or Alaska Native	
		5	Native Hawaiian or Pacific Islander	
		6	Some other race	
Highest degree earned	Categorical	0	Doctorate	Comparison to previous studies
		1	Master	
		2	Bachelor	
Primary practice area	Categorical	0	Clinical Nutrition - acute care/inpatient	Comparison to previous studies
		1	Clinical Nutrition - ambulatory care	
		2	Clinical Nutrition - long term care	

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Primary practice area, cont.		3	Community and Public Health Nutrition	
		4	Management and Executive Leadership	
		5	Consultation, Business & Industry, Entrepreneur	
		6	Education and Research	
		7	Other position not listed	
Served as a preceptor	Categorical	0	I have never served as a preceptor	Prevalence in current sample; correlation with age, impostor phenomenon, mentorship, and job satisfaction
		1	I have previously served as a preceptor but not in the past 12 months	
		2	I have served as a preceptor in the past 12 months	

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Mentor	Categorical	0	I have never had someone who I consider to be a professional mentor	Prevalence in current sample; correlations with age, impostor phenomenon and job satisfaction
		1	I have previously had a professional mentor but do not have one currently	
		2	I currently have someone I consider to be a professional mentor	
Age	Continuous	Numeric	Age in years	Comparison to national data and previous studies; correlation with impostor phenomenon, mentorship, years of experience, and job satisfaction

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Total years' experience as an RD	Continuous	Numeric	Years of experience	Comparison to previous studies; correlation with age, impostor phenomenon, mentorship, and job satisfaction
Total years' experience in primary practice area	Continuous	Numeric	Years in practice area	Comparison to previous studies; correlation with age, impostor phenomenon, mentorship, and job satisfaction
Total years' experience in current position	Continuous	Numeric	Years in current position	Comparison to previous studies; correlation with age, impostor phenomenon, mentorship, and job satisfaction

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Clance IP Scale	Continuous	Numeric	Total IP Score	Comparison to previous studies; correlations with age, job satisfaction, mentorship, and years of experience
	Categorical, using Clance (n.d.) method	0	Few impostor characteristics	Prevalence in current sample; comparison to previous studies
		1	Moderate IP experiences	
		2	Frequent impostor feelings	
		3	Intense IP experiences	
	Categorical, using Holmes, et. al., (1993) method	0	Not an impostor	Prevalence in current sample
		1	Impostor	

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Spector Job Satisfaction Survey (JSS)	Continuous	Numeric	Total JSS score; Facet (specified) score	Prevalence in current sample; correlation with MOAQ scores; correlations with age, impostor phenomenon, years of experience, and mentorship
	Categorical	0	Satisfied	Comparison to previous studies
		1	Ambivalent	
		2	Dissatisfied	

Table 5, cont.

Variable	Type	Code Value	Variable Label	Usage
Michigan Organizational Assessment Questionnaire (MOAQ)	Continuous	Numeric	Average job MOAQ score; average role MOAQ score	Comparison to previous studies; correlation with JSS scores; for satisfaction with preceptor role, correlations with age, impostor phenomenon, years of experience, and mentorship
	Categorical	0	Satisfied	Prevalence in current sample
		1	Ambivalent	
		2	Dissatisfied	

Multiple demographic variables were collected as whole-number continuous variables, including age and total years working as an RDN. Continuous variables not previously researched included total years working in the practice area and total years working in the current position.

The Clance Impostor Scale

The Clance Impostor Phenomenon Scale (CIPS) is a 20-question validated tool for quantifying the impostor feelings of a respondent (Chrisman et al., 1995; Clance, n.d.). Responses are based on a 5-point Likert scale (5 = very true, 4 = often, 3 = sometimes, 2 = rarely, and 1 = not at all true) with no reverse scored items. Scores for each line item are summed to create a total impostor phenomenon score. This tool has been shown to have convergent validity, correlating highly with other measures of the concept (Chrisman et al., 1995). Discriminant validity was indicated in the same study, showing that the scale measured a construct that was significantly different from depression, self-esteem, and social anxiety.

Original categorization of CIPS scores yields four categories (Clance, n.d.): scores of (a) 0-40 = few impostor characteristics, (b) 41-60 = moderate impostor phenomenon experiences, (c) 61-80 = frequent impostor feelings, and (d) 81- 100 = intense impostor phenomenon experiences. Other researchers have felt these categories were arbitrary and established a cut point of 62 as the best indicator of impostors (Holmes et al., 1993). This study evaluated the prevalence of impostor phenomenon using both methods. Additionally, total CIPS scores were used for correlations with job satisfaction, age, years of experience, years in primary practice area, years in current position, and having a mentor.

The Spector Job Satisfaction Survey

The Job Satisfaction Survey (JSS) is a validated tool developed to address deficits identified in previous tools and was specifically tested in human services employees (Spector, 1985, 1997). This scale is a 36-question tool that can be used to evaluate total satisfaction as well as satisfaction in nine separate facets of satisfaction. Responses are based on a 6-point Likert scale (6 = agree very much, 5 = agree moderately, 4 = agree slightly, 3 = disagree slightly, 2 = disagree moderately, and 1 = disagree very much), with 19 items utilizing reverse scoring. Reverse scoring and alignment of line items with facets of satisfaction are identified in Table 6.

Spector (n.d.-a) indicates that interpretation is best evaluated on a spectrum from dissatisfied (low) to satisfied (high) with no definitive cut points. He also provided a method of creating categories that has been used in multiple studies (Abad-Jorge & Butcher, 2016; Goddard & Enrione, 2013; Moore et al., 2021; Sauer et al., 2012; Talenfeld & Enrione, 2015). These categories include: (a) satisfied = total score of 144-216 and facet scores of 16-24, (b) dissatisfied = total score of 36-108 and facet scores of 4-12, and (c) ambivalent = total score between 108 and 144 and facet scores between 12 and 16 (Spector, n.d.-a). This study utilized these categories for identifying the prevalence of satisfaction among RDNs and total scores for correlations.

The Michigan Organizational Assessment Questionnaire

The Michigan Organizational Assessment Questionnaire (MOAQ) is a 3-question assessment of job satisfaction (Spector, n.d.-b, 1997). A meta-analysis indicated that this tool is reliable and has construct validity (Bowling & Hammond, 2008). Studies have used a variety of scales, including 5-, 6-, and 7-point Likert scales, with the first question

reverse-scored. The current study used a 6-point Likert scale (6 = agree very much, 5 = agree moderately, 4 = agree slightly, 3 = disagree slightly, 2 = disagree moderately, and 1 = disagree very much). Assessment of the scale involves averaging the scores for all line items after reverse-scoring the first item. No categorizations are published for indicating satisfied, ambivalent, or dissatisfied; however, following the convention defined by Spector (n.d.-a), scores of 1-2 would indicate dissatisfied, 3-4 ambivalent, and 5-6 satisfied.

Table 6.

Job Satisfaction Survey Line-Item Alignment with Facets of Satisfaction

Subscale	Item Numbers
Pay	1, 10*, 19*, 28
Promotion	2*, 11, 20, 33
Supervision	3, 12*, 21*, 30
Fringe benefits	4*, 13, 22, 29*
Contingent rewards	5, 14*, 23*, 32*
Operating conditions	6*, 15, 24*, 31*
Coworkers	7, 16*, 25, 34*
Nature of work	8*, 17, 27, 35
Communication	9, 18*, 26*, 36*
Total satisfaction	1-36

* Indicates item is reverse scored.

Data Analyses

Data from Qualtrics were imported into the IBM *Statistical Program for Social Sciences (SPSS)*, version 29, and variables were labeled and coded. Demographic variables were coded as indicated in Table 5. Descriptive statistics, including frequencies of categorical data and means and standard deviation of continuous data, were evaluated to provide a picture of the sample and comparisons with known demographics of RDNs.

Research Question (RQ)

Do years of experience, years in practice area, years in current position, age, having a mentor and total impostor phenomenon score correlate with a RDN's job satisfaction and satisfaction with the role of preceptor?

Multiple correlation analysis for job satisfaction was completed using the following variables: Years of experience, years in practice area, years in current position, and age were entered as continuous variables as reported by respondents. A sum score of all 20 items from the Clance Impostor Phenomenon Scale was created to serve as the continuous variable for impostor phenomenon. Responses to having a mentor were coded as identified in Table 5. A sum score of all 36 items from the JSS was created to serve as the continuous variable for job satisfaction. The average MOAQ score for role satisfaction questions that were asked only of those who indicated having served as a preceptor at some point provided the continuous variable for preceptor role satisfaction.

Sub-Question One (SQ1)

How prevalent is impostor phenomenon among RDNs and preceptors of dietetic students?

To address Sub-Question One (SQ1), sum scores were created from the 20 statements of the Clance Impostor Phenomenon Scale. Categorical data were created using two methods: (a) original classification as identified by Clance (n.d.), and (b) the classification identified by Homes et al. (1993). Imposter phenomenon categories were coded as identified in Table 5. Frequencies were generated for imposter phenomenon categories for (a) the total sample, (b) highest degree earned, (c) practice area, (d) precepting, and (e) mentorship categories.

Mean and standard deviation were evaluated. The differences between means were calculated for (a) people who have and have not precepted within the past 12 months, and (b) those who do and do not currently have a person they consider to be a mentor.

Sub-Question Two (SQ2)

Do scores on the Michigan Organizational Assessment Questionnaire correlate with the Spector Job Satisfaction Survey scores in RDNs?

Multiple steps were involved in preparing to determine if the MOAQ correlates with the JSS. First, items on the JSS were reverse scored as needed, then a sum score was created for the total JSS score by adding all responses for each respondent for items 1-36 on the JSS. Next, after reverse scoring of the first item, average scores were calculated for the three MOAQ questions for job satisfaction. Correlational analysis was completed

comparing the total satisfaction score from the JSS to the average MOAQ score for overall satisfaction to determine the relationship between the two instruments.

Sub-Question Three (SQ3)

How satisfied are RDNs with their jobs and the role of preceptor?

To address Sub-Question Three (SQ3), after reverse scoring of appropriate line items, sum scores were created from the 36 statements of the JSS as well as sum score for each facet of job satisfaction (Table 6). Categories for satisfaction were created as identified in Table 5. Frequencies were generated for JSS total satisfaction categories for (a) the total sample, (b) practice area, (c) precepting, (d) mentorship categories, and (e) impostor phenomenon categories. Means and standard deviations for total satisfaction and each facet were evaluated. Differences in means were analyzed by (a) practice area, (b) precepting, (c) mentorship, and (d) impostor categorization.

For satisfaction in the role of the preceptor, only those who indicated that they had ever served as a preceptor were asked the three MOAQ statements specific to satisfaction in the role of a preceptor. The first item was reverse scored, and average scores from these three items related to precepting were calculated. Categories were created as identified in Table 5. Frequencies were generated for the role satisfaction categories for (a) the total sample, (b) practice area, (c) precepting (currently precepting vs. precepted in the past), (d) mentorship categories, and (e) impostor categorization. Means and standard deviations were evaluated. Differences in means were analyzed by (a) practice area, (b) precepting (currently vs in the past), (c) mentorship, and (d) impostor categorization.

Summary

Dietetic preceptors are an invaluable component of dietetics education. A longstanding shortage of preceptors limits the number of students who can navigate the educational system and become qualified to take the Registration Examination for Dietitian Nutritionists. Research has explored the overarching benefits and barriers to precepting, but no known studies have attempted to quantify RDNs' satisfaction with the role of a preceptor or identify factors correlating with that satisfaction. This chapter sought to outline a methodology and data analysis plan for testing potential correlates, including impostor phenomenon, years of experience, years in the practice area and current position, and having a professional mentor.

CHAPTER IV

RESULTS

Surveying Registered Dietitian Nutritionists' perceptions of job satisfaction is an effective way of evaluating morale in the workplace. Investigating impostor phenomenon and the use of mentors adds new aspects to the knowledge base that have been minimally researched. Additionally, these topics have not been explored related to an RDN's satisfaction with the role as a dietetic preceptor. This study was undertaken to explore factors that may impact satisfaction with precepting and potentially impact the decision to serve as a preceptor to dietetic students. This chapter presents data that address this dissertation's overarching research question and three sub-questions regarding age, experience as an RDN, use of a mentor, impostor phenomenon, job satisfaction, and satisfaction with the role as a dietetic preceptor.

Sample

Of the 10,000 survey links sent to credentialed nutrition and dietetics providers, 560 participants responded, providing a 5.6% response rate. This represents approximately 0.5% of all RDNs. Data were analyzed for outliers. All respondents fell within an appropriate age range for RDNs (range = 22-74 years). Two respondents were removed for reporting total years of experience greater than age. Two respondents reported a difference between age and years of experience less than 21 years. Since all RDNs must complete a minimum of a bachelor degree followed by supervised practice (Academy of Nutrition and Dietetics, n.d.-f), it is unlikely that people will be able to earn the RDN credential at an age younger than 21; therefore, these respondents were also removed. Twelve respondents were removed for reporting a greater number of years in

their current position than years of total experience. Five respondents were removed for location coordinates outside of the United States. An additional 51 respondents started the survey but did not answer any questions and were therefore removed, leaving a total of 488 respondents.

Of the remaining 488 respondents, 30 only answered demographic questions, 29 answered demographics and the Clance Impostor Phenomenon Scale (CIPS), and 429 completed the entire survey. For the purpose of comparing survey completers and non-completers, the 59 who answered demographics and/or CIPS were considered non-completers.

Sample demographics are provided in Table 7. There were no significant differences in gender identity, age, Hispanic or Latino origin, race/ethnicity, highest degree earned, primary practice area, years of total experience, years in primary practice area, years in current position, precepting, or having a mentor between survey completers and non-completers.

Quantitative analysis was used to answer the research question and three sub-questions:

RQ: Do years of experience, years in practice area, years in current position, age, having a mentor, and total impostor phenomenon score correlate with a RDN's job satisfaction and satisfaction with the role of preceptor?

SQ1: How prevalent is impostor phenomenon among RDNs and preceptors of dietetic students?

SQ2: Do scores on the Michigan Organizational Assessment Questionnaire correlate with the Spector Job Satisfaction Survey scores in RDNs?

Table 7.

Selected Demographic Characteristics of Survey Completers and Non-Completers.

Characteristic	Completers	Non-Completers
Sample, n	429	59
Gender Identity, %		
Woman	94.9	95.1
Man	4.7	3.4
Trans woman	0.2	0
Trans man	0	0
None/ Prefer not to answer	0	1.7
Mean Age, y	42.1	42.0
Hispanic or Latino, %	10.3	15.3
Race/ Ethnicity, %		
White	88.8	87.9
Black or African American	3.7	1.7
Asian	4.4	5.2
American Indian or Alaska Native	0.2	1.7
Some other race	2.8	3.4
Highest Degree Earned, %		
Bachelor	36.2	42.4
Master	58.6	54.2
Doctorate	5.1	3.4

Table 7, cont.

Characteristic	Completers	Non-Completers
Primary Practice Area, %		
Clinical Nutrition – Acute Care/ Inpatient	20.3	31.0
Clinical Nutrition – Ambulatory Care	18.4	17.2
Clinical Nutrition – Long Term Care	11.4	10.3
Community and Public Health Nutrition	12.1	17.2
Management and Executive Leadership	11.0	3.4
Consultation, Business & Industry, Entrepreneur	8.6	12.1
Education and Research	6.8	5.2
Other position not listed	11.4	3.4
Mean Experience, y		
Total	15.2	15.0
In Primary Practice Area	10.9	12.7
In Current Position	6.2	7.1
Precepting, %		
Currently	37.5	32.2
Previously	34.3	33.9
Never	28.2	33.9
Mentor Use, %		
Currently	24.9	27.1
Previously	41.3	37.3
Never	33.8	35.6

SQ3: How satisfied are RDNs with their jobs and the role of preceptor?

Data Analysis

Research Question (RQ)

Do years of experience, years in practice area, years in current position, age, having a mentor, and total impostor phenomenon score correlate with a RDN's job satisfaction and satisfaction with the role of preceptor?

To explore factors correlating with job satisfaction, age, years of experience, years in the practice area, years in current experience, impostor phenomenon, and JSS scores were entered into the correlational analysis as continuous variables. To explore factors correlating with preceptor role satisfaction, the average modified MOAQ score for preceptor role was used.

Results of the multiple correlation analysis are listed in Table 8. Weak but significant positive correlations were found between total JSS scores and age as well as use of a mentor. A significant, moderate negative correlation was found between total impostor phenomenon and JSS scores. A weak but significant positive correlation was found between modified MOAQ preceptor satisfaction scores and use of a mentor, and a weak negative correlation with impostor phenomenon score.

Table 8.

Descriptive Statistics and Correlations for Age, Experience, Impostor Phenomenon, Use of a Mentor, and Satisfaction.

Variable	*n*	*M*	*SD*	1	2	3	4	5	6	7
1 – Total years of work experience	487	15.18	11.62	–						
2 – Years of experience in practice area	482	11.14	9.78	.85**	–					
3 – Years of experience in current position	479	6.28	7.11	.55**	.64**	–				
4 – Age in years	479	42.11	12.46	.88**	.77**	.51**	–			
5 – Use of a mentor[a]	488	.91	.77	-.15**	-.15**	-.10*	-.15**	–		
6 – CIPS sum score	458	54.52	16.35	-.32**	-.27**	-.23**	-.33**	-.10*	–	
7 – JSS sum score	429	142.28	27.33	.09	.06	.03	.14**	.17**	-.30**	–
8 – Modified MOAQ preceptor role satisfaction score	308	4.62	1.13	.02	-.01	-.08	.07	.15**	-.16**	.24**

[a] 0 = never had a mentor, 1 = previously had a mentor, 2 = currently have a mentor

*p < .05, **p < .01

Sub-Question One (SQ1)

How prevalent is impostor phenomenon among RDNs and preceptors of dietetic students?

To prepare for data analysis, sum scores were created for all respondents (n=458). Categorical variables were created for both the Clance (n.d.) and Holmes (1993) methods of evaluating scores. Frequency of impostor categories utilizing Clance interpretation (Clance, n.d.) among all respondents are shown in Figure 3. Frequency of impostor categories for demographics are provided in Table 9.

Figure 3.

Frequency in All Respondents of Impostor Phenomenon Categories Utilizing the Clance Method (n = 458)

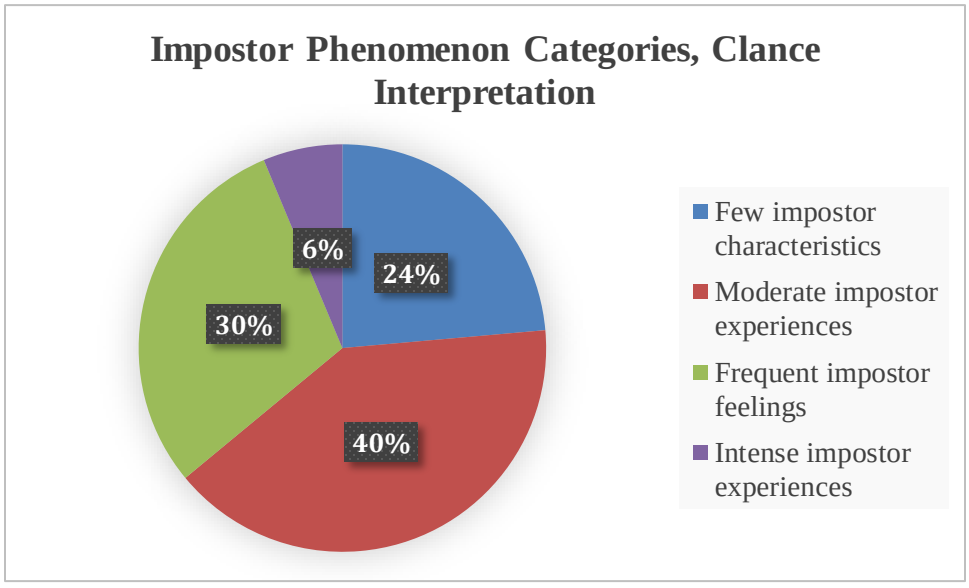


Table 9.

Frequency of Impostor Phenomenon Categories Utilizing the Clance Method for Highest Degree Earned, Practice Area, Precepting and Mentor Use.

Characteristic	Few Impostor Characteristics	Moderate Impostor Phenomenon Experiences	Frequent Impostor Feelings	Intense Impostor Phenomenon Experiences
Highest Degree Earned, % (n = 457)				
Bachelor	25.7	33.3	33.3	7.6
Master	23.1	43.2	28.0	5.7
Doctorate	13.6	59.1	22.7	4.5
Primary Practice Area, % (n = 457)				
Clinical Nutrition – Acute Care/ Inpatient	14.6	38.5	40.6	6.3
Clinical Nutrition – Ambulatory Care	22.9	48.2	22.9	6.0
Clinical Nutrition – Long Term Care	33.3	35.3	25.5	5.9

Table 9, cont.

Characteristic	Few Impostor Characteristics	Moderate Impostor Phenomenon Experiences	Frequent Impostor Feelings	Intense Impostor Phenomenon Experiences
Primary Practice Area, % (n = 457)				
Community and Public Health Nutrition	17.2	43.1	31.0	8.6
Management and Executive Leadership	29.2	37.5	31.3	2.1
Consultation, Business & Industry, Entrepreneur	31.7	48.8	14.6	4.9
Education and Research	27.6	44.8	17.2	10.3
Other position not listed	25.5	27.5	39.2	7.8
Precepting, % (n = 458)				
Currently	22.2	40.4	33.3	4.1
Previously	28.7	42.0	21.7	7.6
Never	19.2	38.5	34.6	7.7

Table 9, cont.

Characteristic	Few Impostor Characteristics	Moderate Impostor Phenomenon Experiences	Frequent Impostor Feelings	Intense Impostor Phenomenon Experiences
Mentor Use, % (n = 458)				
Currently	26.7	41.4	24.1	7.8
Previously	24.9	42.3	28.6	4.2
Never	19.6	37.3	35.3	7.8

Chi square goodness of fit was evaluated to determine if the proportion of respondents in each impostor phenomenon category was equal within various demographic categories. There were no significant differences in frequencies for highest degree earned, $X^2(6, 457) = 7.901$, $p = .245$, practice area, $X^2(21, 457) = 27.946$, $p = .142$, precepting, $X^2(6, 458) = 10.520$, $p = .104$, or use of mentoring, $X^2(6, 458) = 7.361$, $p = .289$.

Frequency of impostor categories utilizing Holmes' interpretation (Holmes et al., 1993) among all respondents are shown in Figure 4. Frequency of impostor categories for demographic categories are provided in Table 10.

Figure 4.

Frequency in All Respondents of Impostor Phenomenon Categories Utilizing the Holmes Method (n = 458)

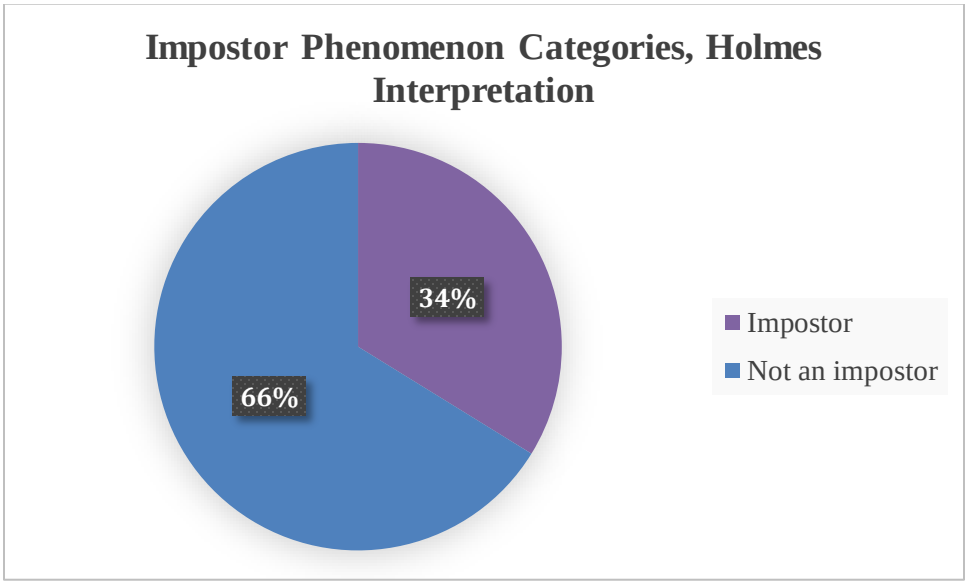


Table 10.

Frequency of Impostor Phenomenon Categories Utilizing the Holmes Method for Highest Degree Earned, Practice Area, Precepting and Mentor Use.

Characteristic	Not an Impostor	Impostor
Highest Degree Earned, % (n = 457)		
Bachelor	62.0	38.0
Master	68.2	31.8
Doctorate	72.7	27.3
Primary Practice Area, % (n = 457)		
Clinical Nutrition – Acute Care/ Inpatient	53.1	46.9
Clinical Nutrition – Ambulatory Care	75.9	24.1
Clinical Nutrition – Long Term Care	70.6	29.4
Community and Public Health Nutrition	62.1	37.9
Management and Executive Leadership	68.8	37.9
Consultation, Business & Industry, Entrepreneur	82.9	17.1
Education and Research	72.4	27.6
Other position not listed	56.9	43.1
Precepting, % (n = 458)		
Currently	64.3	35.7
Previously	72.0	28.0
Never	61.5	38.5

Table 10, cont.

Characteristic	Not an Impostor	Impostor
Mentor Use, % (n = 458)		
Currently	72.4	27.6
Previously	69.3	30.7
Never	57.5	42.5

Chi square goodness of fit was evaluated to determine if the proportion of respondents in each impostor phenomenon category was equal within various demographic categories. There were no significant differences in frequencies for highest degree earned, $X^2(2, 457) = 2.231$, $p = .328$ and precepting, $X^2(2, 458) = 3.867$, $p = .145$. A significant difference was identified in frequencies for practice area, $X^2(7, 457) = 19.489$, $p = .007$, and use of mentoring, $X^2(2, 458) = 7.971$, $p = .019$.

The mean impostor phenomenon score for all respondents was 54.52 (range = 20-94; SD = 16.35), indicating moderate impostor experiences. A one-way ANOVA was performed to compare mean impostor phenomenon scores among practice areas, showing no significant difference ($F(7, 449) = 1.701$, $p = .107$).

A one-way ANOVA was performed to compare mean impostor phenomenon scores between groups based on precepting experience, showing a significant difference among groups ($F(2, 455) = 3.554$, $p = .029$). Tukey's HSD Test for multiple comparisons found that the mean impostor phenomenon value for those who never served as a preceptor (n = 130) was higher than those who previously served as a preceptor (n = 157)

(p = .022, 95% C.I. = [.6056, 9.6743]). There was no statistically significant difference between those currently precepting (n = 157) and those who precepted in the past (p = .427) or those who never precepted (p = .427).

A one-way ANOVA compared mean impostor phenomenon scores between groups based on experience with having a mentor, indicating a significant difference among groups ($F(2, 455) = 3.053$, $p = .048$). However, Tukey's HSD Test for multiple comparisons found that the mean impostor phenomenon value for those who never had a mentor was insignificantly lower than those who previously had a mentor (p = .070) and those who currently had a mentor (p = .105). There was no statistically significant difference between those who currently had a mentor and those who used a mentor in the past (p = .996).

Sub-Question Two (SQ2)

Do scores on the Michigan Organizational Assessment Questionnaire correlate with the Spector Job Satisfaction Survey scores in RDNs?

To determine if JSS scores correlated with the shorter MOAQ score in RDNs, a Pearson correlation coefficient was computed. There was a significant, strong positive correlation between the two variables, $r = .675$, $p < .001$. The strong correlation between the two tools indicates that the MOAQ is an acceptable measure of job satisfaction and likely a valid measure of satisfaction in the role of preceptor.

Sub-Question Three (SQ3)

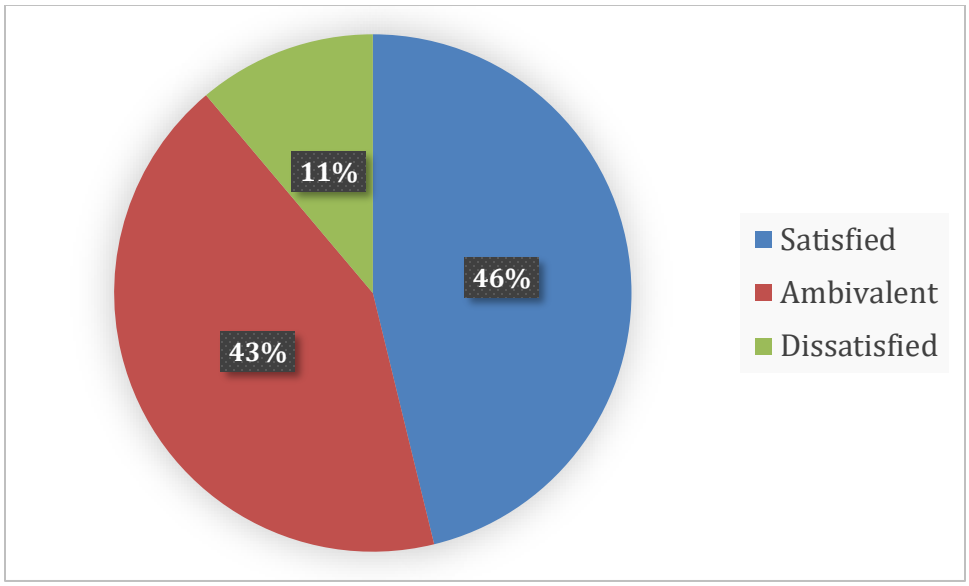
How satisfied are RDNs with their jobs and the role of preceptor?

To prepare for data analysis, sum scores were created for all respondents (n = 429). Categorical variables were created for total satisfaction and each facet. Frequency

of total satisfaction categories among all respondents are shown in Figure 5. Mean scores for total satisfaction and each facet are provided in Table 11.

Figure 5.

Frequency in All Respondents of Job Satisfaction Categories (n = 429)



A one-way ANOVA compared mean job satisfaction scores among groups based on primary practice area, indicating no significant differences ($F(7, 421) = 1.429$, $p = .192$).

A one-way ANOVA was performed to compare mean job satisfaction scores among groups based on precepting experience, indicating a significant difference ($F(2, 426) = 4.487$, $p = .012$). Tukey's HSD Test for multiple comparisons found that the mean job satisfaction score for those who currently served as a preceptor ($n = 161$) was higher than those who never served as a preceptor ($n = 121$) ($p = .020$, 95% C.I. = [1.14, 16.48]),

Table 11.

Mean and Standard Deviation of Total and Facet Satisfaction Scores (n = 429).

Satisfaction Category	Mean	Std. Dev.
Total satisfaction	142.23	27.33
Supervision	19.14	4.68
Nature of work	19.03	4.07
Coworkers	18.79	3.79
Communication	16.08	4.34
Fringe benefits	15.25	5.06
Contingent rewards	14.74	4.73
Operating conditions	14.26	4.03
Pay	12.85	5.03
Promotion	12.14	4.94

and the score for those who previously served as a preceptor (n = 147) was higher than those who never served as a preceptor (p = .027, 95% C.I. = [.78, 16.44]). There was no statistically significant difference between those currently precepting and those who precepted in the past (p = .998).

A one-way ANOVA compared mean job satisfaction scores among groups based on mentoring experience, indicating a significant difference ($F(2, 426) = 7.161$, $p < .001$). Tukey's HSD Test for multiple comparisons found that the mean job satisfaction score for those who currently had a mentor (n = 107) was higher than those who never had a

mentor (n = 145) (p = .002, 95% C.I. = [3.69, 19.85]), and the score for those who previously had a mentor (n = 177) was higher than those who never had a mentor (p = .007, 95% C.I. = [2.14, 16.34]). There was no statistically significant difference between those who currently had a mentor and those who had a mentor in the past (p = .725).

An independent samples *t*-test was performed to evaluate whether there was a difference in JSS scores among those who were identified using the Holmes et al. (1993) impostor phenomenon categorizations. The results indicated that those classified as not an impostor (M = 146.47, SD = 27.10) had significantly higher job satisfaction than those who were classified as impostors (M = 134.16, SD = 26.01), $t(427) = 4.52$, $p < .001$.

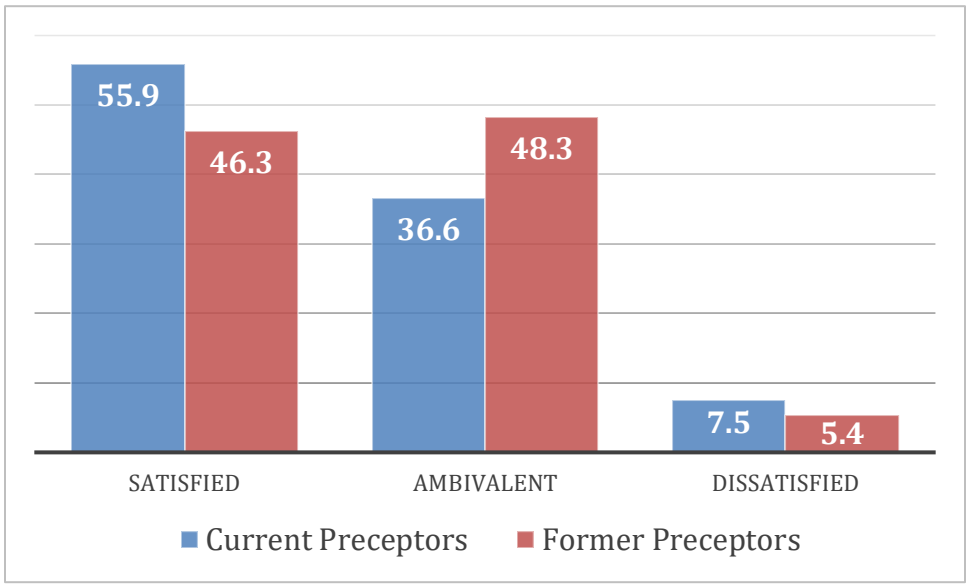
The Michigan Organizational Assessment Questionnaire (MOAQ) was modified to capture respondents' perceptions of satisfaction with the role as a preceptor. After identifying a strong correlation between the JSS and MOAQ, scores on the role satisfaction questions were prepared following the same procedure as the MOAQ scores for job satisfaction. Frequencies of role satisfaction are provided in Figure 6. The mean modified MOAQ score was 4.62 (range = 1-6, SD = 1.13).

An independent samples *t*-test was performed to evaluate whether there was a difference in preceptor role satisfaction between current (n = 161) and former (n = 147) preceptors. The results indicated that there was no significant difference between current preceptors (M = 4.684, SD = .09141) and former preceptors (M = 4.5488, SD = .09032).

A one-way ANOVA was performed to compare mean preceptor role satisfaction scores among groups based on primary practice area, showing no significant differences ($F(7, 300) = 1.460$, $p = .181$).

Figure 6.

Frequency of Preceptor Role Satisfaction in Current and Former Preceptors.



An independent samples *t*-test evaluated whether there was a difference in modified MOAQ preceptor role satisfaction scores among those who were identified using the Holmes et al. (1993) impostor phenomenon categorizations. The results indicated that those classified as not an impostor (M = 4.74, SD = 1.06) had significantly higher preceptor role satisfaction than those who were classified as impostors (M = 4.37, SD = 1.24), $t(306) = 2.71$, p = .007.

A one-way ANOVA compared mean preceptor role satisfaction scores among groups based on mentoring experience, indicating a significant difference ($F(2, 305) = 3.525$, p = .031). Tukey's HSD Test for multiple comparisons found that the mean preceptor role satisfaction score for those who currently had a mentor was higher than those who never had a mentor (p = .023, 95% C.I. = [.05, .83]). There was no statistically significant difference between those who currently had a mentor and those who had a

mentor in the past (p = .353) or those who previously had a mentor and those who never had a mentor (p = .312).

Summary

Quantitative analyses were completed to identify relationships between variables relating to job satisfaction and satisfaction with the role of a dietetics preceptor. Correlations were found between job satisfaction, age, use of a mentor, and impostor phenomenon. Correlations with preceptor satisfaction were found with impostor phenomenon and use of a mentor. Additionally, frequencies of impostor phenomenon, job satisfaction, and preceptor role satisfaction were quantified. The results of data analysis can help identify areas of intervention and future research to attempt to increase RDNs' satisfaction with their jobs and the role of preceptor.

CHAPTER V

DISCUSSION

Registered Dietitian Nutritionists (RDNs) are credentialed food and nutrition experts. Dietetic preceptors are experienced professionals who provide supervised practice experience to dietetics students and are an essential piece of dietetics education. Career construction theory indicates that a variety of factors, including career self-concept, adaptability, changes in job situations, and the ability to have discussions about these topics impact career decisions. This paper sought to explore factors that impact job satisfaction of RDNs and the satisfaction of dietetic preceptors in their role with students.

An invitation to complete a survey with questions about demographics, impostor phenomenon, status as a preceptor, use of a mentor, job satisfaction, and preceptor role satisfaction was sent to 10,000 credentialed nutrition professionals. Five hundred sixty people began the survey. This chapter discusses the survey results and key findings related to impostor phenomenon and job satisfaction in RDNs who do and do not precept dietetics students. In addition, the implications for practitioners, researchers and policy makers are discussed.

Correlates of Job and Role Satisfaction

Do years of experience, years in practice area, years in current position, age, having a mentor, and total impostor phenomenon score correlate with a RDN's job satisfaction and satisfaction with the role of preceptor?

As stated in Chapter IV, variables were entered into a multiple correlation analysis, with the Clance Impostor Phenomenon Scale (CIPS) sum score used to quantify impostor phenomenon, Spector Job Satisfaction Survey (JSS) sum score to quantify job

satisfaction, and modified Michigan Organizational Assessment Questionnaire (MOAQ) for preceptors average score to quantify preceptor role satisfaction. Weak positive correlations were found between age and job satisfaction, use of a mentor and job satisfaction, and use of a mentor and preceptor role satisfaction. A moderate negative correlation was found between impostor phenomenon and job satisfaction, and a weak negative correlation between impostor phenomenon and preceptor role satisfaction. No significant correlations with job satisfaction or preceptor role satisfaction were found with years of experience, years in practice area, or years in primary position, and no significant correlation was found between age and preceptor role satisfaction.

These findings add new dimensions to research on job satisfaction in RDNs. Age and years of experience have previously been researched related to job satisfaction in RDNs (Agriesti-Johnson & Broski, 1982; Calbeck et al., 1979; Rehn et al., 1989; Sims & Khan, 1986); however, a relationship between job satisfaction and years in practice area or years in current position have not been published. The lack of correlation indicates that newness in a position did not impact job satisfaction in this sample.

Only one previous study explored a connection between job satisfaction and use of a mentor, and that study did not explore the perceptions specifically relating to preceptors (Mortensen et al., 2002). This current study corroborates previous findings that using a mentor increases job satisfaction. Additionally, people who currently have a mentor express higher satisfaction within the role as a preceptor. Career construction theory states that conversations around career development and adaptability help to inform career decisions. Mentors can facilitate conversations about job changes and alignment of skills and personality with job duties. Additionally, mentors may be

experienced RDNs who can guide newer professionals through challenges with training the next generation of professionals. This may lead to greater career and role satisfaction for RDNs and preceptors.

Impostor Phenomenon Prevalence

How prevalent is impostor phenomenon among RDNs and preceptors of dietetic students?

This study indicated very similar levels of impostor phenomenon by Clance categorizations in RDNs as a previously published study (Hernandez & Lopez, 2023) and lower mean impostor phenomenon scores than another (Landry et al., 2022). Landry et al. (2022) included students and practitioners in their study where Hernandez and Lopez (2023) only surveyed RDNs. Regarding educational preparation, this study had similar findings to Hernandez and Lopez (2023); however, Landry et al. (2022) identified a significant difference between those with a bachelor's degree and those with a doctoral degree. As discussed in Hernandez and Lopez (2023), everyone who makes it through the requirements to become an RDN (Academy of Nutrition and Dietetics, n.d.-f) could be considered highly achieving. Navigating the requirements for the various pathways of the educational gauntlet is confusing to potential students, current students, and even practitioners. After completing educational and supervised practice requirements, graduates then must pass the Commission on Dietetic Registration's credentialing examination that has a 71% pass rate for first time test takers (Commission on Dietetic Registration, n.d.-d). This rate increases to 89% for those who can afford to take the exam multiple times and pass within one year of their first attempt.

When using Holmes et al. (1993) categories, a difference in means was noted between people who never precepted and those who had precepted in the past but not those currently precepting. Those who have never precepted and those currently precepting had similar levels of feelings of impostorism. Future research could explore factors impacting impostor phenomenon specifically in RDNs and dig deeper into why those who have never precepted and those currently precepting have different levels of imposterism than those who no longer precept students. It may be that impostor phenomenon is holding some people back from serving as a preceptor, while others decide to serve as a preceptor and their feelings of impostorism become more prevalent as the person is frequently in the spotlight due to interactions with students and program directors.

Initial ANOVA results indicated that there were differences in mean impostor phenomenon scores among those reporting different experiences with using a mentor. Further post hoc analysis indicated that the between groups differences did not reach significance. Early research on impostor phenomenon indicated that psychotherapy was needed to combat impostor beliefs (Clance & Imes, 1978; Langford & Clance, 1993). Based on the current results, having a mentor may help some people identify and combat their feelings of impostorism, but those with higher scores would likely benefit more from psychotherapy with a licensed practitioner.

Debate exists over the best method of categorizing impostor phenomenon (Bravata et al., 2020; Holmes et al., 1993). Believing that Clance's categories were arbitrary, Holmes et al. (1993) established a value they felt best differentiated those who were experiencing impostorism. The ideal method of classifying total scores may be

decided by considering the goals of the evaluation. In research settings, if absolute distinctions between impostors and non-impostors are desired, the Holmes et al. (1993) method may be better. However, when working with individuals, this dichotomous method may not be best. The Clance categorizations provide a spectrum. For example, those individuals who score at the bottom of Clance's frequent impostor feelings category (Clance, n.d.) are scored as not an impostor using the other method (Holmes et al., 1993). Providing people with absolute categorizations may negate the feelings of those scoring at the higher end of moderate impostor experiences and the low end of frequent feelings. These people may feel unheard or start to buy into the idea that their experiences and feelings do not have merit.

The CIPS was found to identify three factors: being a fake, discounting achievements, or gaining achievements due to luck (Chrisman et al., 1995). Leadership expert Patrick Lencioni stated, "we discount what comes easy to us" (Cole & Lencioni, 2022). Some RDNs may discount their achievements when they see others struggling harder than them due to differences in skills, talents, and experiences. Career construction theory indicates that everyone has differences in these three areas that directly impact career decisions (Savickas, 2005). When RDNs find certain aspects of their work to be simple, they may discount the hard work that was put into getting where they are. Other people may have a self-concept, perhaps rooted in childhood experiences, that makes them feel like they are not deserving of opportunities that they received when the same opportunities were not available to other peers or family members. Some people may have been told they were not good at certain things, like math and science, and grow up to have an occupational self-concept that does not align with their role as a dietitian.

In recent years, impostor phenomenon has become a hot topic in lay literature (Bravata et al., 2020). Despite being identified in the 1970s (Clance & Imes, 1978), it only became popular over the past decade. Mean scores from this sample indicate moderate impostor phenomenon experiences (Clance, n.d.) or not an impostor (Holmes et al., 1993). From this research, it may be that impostor phenomenon is becoming an accepted concept but the majority of dietitians are struggling with a lack of career self-concept or confidence and not the hallmark characteristics of impostor phenomenon.

Comparison of Spector's Job Satisfaction Survey to Michigan Organizational Assessment Questionnaire

Do scores on the Michigan Organizational Assessment Questionnaire correlate with the Spector Job Satisfaction Survey scores in RDNs?

The Spector Job Satisfaction Survey (JSS) is a 36-item tool that was specifically designed to evaluate job satisfaction in human services occupations (Spector, 1985, 1997). This instrument can be used to assess total job satisfaction as well as satisfaction with nine specific areas. The Michigan Organization Assessment Question (MOAQ) is a three-item tool that can be used to assess overall satisfaction; however, it was not developed for human services occupations or drilling down to specific facets of job satisfaction (Bowling & Hammond, 2008; Spector, 1997). Correlational analysis was completed to see if the shorter MOAQ could be used to assess total satisfaction in lieu of the longer JSS in dietitians and demonstrated a strong positive relationship between the two measures.

In this study population, the MOAQ was a similar measure of total job satisfaction as the JSS. In situations when total job satisfaction is the variable of interest,

the MOAQ could be used. This is especially useful considering that survey fatigue limits survey participation across many populations (Field, 2020; Groves et al., 1992; Kreuter, 2013; Massey & Tourangeau, 2013; Peytchev, 2013). As this is the first known survey to compare these two tools within a group of dietitians, further research should be done to validate these results. If the results of the current study are validated, this creates the ability for researchers to use a much shorter tool to measure job satisfaction in RDNs and potentially have larger sample sizes with a shorter survey.

Job and Preceptor Role Satisfaction of RDNs

How satisfied are RDNs with their jobs and the role of preceptor?

In this study, the JSS was used to evaluate total job satisfaction as well as satisfaction with various facets of their jobs. The mean score for job satisfaction was at the high end of ambivalent. Mean scores for satisfaction with supervision, nature of work, coworkers, and communication indicated satisfaction. Mean scores for fringe benefits, contingent rewards, operating conditions, pay and promotion indicated ambivalent levels of satisfaction. No facets had a mean score indicating dissatisfaction. There was not a statistical difference among means for job satisfaction within practice areas; however, people who are currently serving as a preceptor or had previously served as a preceptor had significantly higher job satisfaction than those who never served as a preceptor, and both those who currently and previously used a mentor had higher job satisfaction than those who never used a mentor. Additionally, those whose CIPS scores were categorized as not an impostor had higher job satisfaction.

A modified version of the MOAQ asking about satisfaction with the role as a preceptor of dietetics students was used to assess preceptor role satisfaction. The mean

modified MOAQ score indicated ambivalence. There were no significant differences in means between current and previous preceptors or when evaluating preceptor role satisfaction by practice area. People whose CIPS scores were classified as impostors had significantly lower preceptor role satisfaction. Additionally, those who never had a mentor had lower satisfaction than those who had a mentor in the previous 12 months.

Job satisfaction is a measure of how much people like their jobs (Spector, 1997). Career construction theory indicates that multiple factors go into career decisions (Savickas, 2005). The amount that a person's background, experiences, personality, and career self-concept align with job tasks and duties impact job satisfaction. The combination of many factors leads to overall job satisfaction.

Almost equal proportions of RDNs were satisfied and ambivalent about satisfaction with their jobs. Current satisfaction was lower than several previously published studies of job satisfaction in RDNs (Calbeck et al., 1979; Mortensen et al., 2002; Sauer et al., 2012) and similar to others (Agriesti-Johnson & Broski, 1982; Sims & Khan, 1986). Job satisfaction has been evaluated at multiple times in history. The most recent study of job satisfaction in RDNs utilized the short form of the Minnesota Satisfaction Questionnaire, which was not validated in service professions (Spector, 1997; Vocational Psychology Research, University of Minnesota, n.d.). Landry et al. (2022) found a mean satisfaction level similar to the mean of engineers, the study group most similar to RDNs in educational preparation (Vocational Psychology Research, University of Minnesota, n.d.). The Minnesota Satisfaction Questionnaire did not have standards for identifying satisfaction versus dissatisfaction, limiting comparisons between the tools. Many factors go into overall job satisfaction; however, the recent COVID-19

pandemic with high workloads for essential workers may have negatively impacted job satisfaction in this sample.

RDNs are the most satisfied with the level of supervision they receive, the nature of their work, and their coworkers, and are least satisfied with pay and opportunities for promotion. The nature of work, supervision and coworkers were top areas of satisfaction in Sauer et al. (2012); however, in that study, operating conditions was the lowest facet. Pay is a commonly cited area of dissatisfaction in the field (Calbeck et al., 1979; Dalton et al., 1993; Rehn et al., 1989; Sims & Khan, 1986). In general, RDNs appear to be satisfied with the job tasks and duties as well as the people they work with. Pay is a contentious subject, as RDNs are among the lowest paid healthcare professionals. This is not an easy area to impact, as pay directly relates to supply and demand as well as perceived value.

This is the first known study of job satisfaction of RDNs who do and do not serve as preceptors. Those serving as preceptors indicated higher job satisfaction. Demonstrating and teaching the role of a dietitian to others may increase confidence and competence in job duties and subsequently increase satisfaction. Serving as a preceptor may increase recognition of the role of the dietitian and the hard work that the employee is doing. Additionally, RDNs who precept students may gain intrinsic satisfaction from helping teach and mentor the next generation of professionals.

This was also the first study to examine the satisfaction of RDNs with the role of preceptor. Role satisfaction indicated ambivalence, similar to overall job satisfaction. It is not unexpected that preceptor role satisfaction would not exceed overall job satisfaction. Similar factors that impact job satisfaction and dissatisfaction probably impact

satisfaction with the role as a preceptor; however, factors impacting role satisfaction were unable to be explored with the modified MOAQ. Previous studies have been published describing benefits and barriers to precepting (AbuSabha, et al., 2018; Hernandez et al., in press; Nasser et al., 2014; Winham et al., 2014). Future research is warranted to explore interventions to increase role satisfaction of dietetics preceptors.

RDNs who ever used a professional mentor had higher job satisfaction than those who never had a mentor. These findings mirror those of the only other known study of the use of mentors and job satisfaction in RDNs (Mortensen et al., 2002). Additionally, preceptor role satisfaction was higher in those who utilized a mentor. Career construction theory indicates that alignment of career self-concept impacts job satisfaction (Savickas, 2005). Career self-concept develops and can change as a person moves through Super's lifespan stages as well as in job transitions. Conversations about career self-concept, job transitions, and adaptability can help people make career decisions. Mentors are experienced professionals who can help facilitate these conversations and help newer professionals adjust to new roles and tasks, leading to greater job satisfaction. Precepting students adds a new level to the job expectations of RDNs that is not specifically taught in educational programs. Mentors can help newer preceptors adjust to these new tasks and expectations and feel confident in their role.

Both job satisfaction and preceptor role satisfaction were decreased in people with impostor phenomenon. These results corroborate the results of the two known studies of impostor phenomenon and job satisfaction (Landry et al., 2022; Vergauwe et al., 2015). Work self-concept, much like contributors to impostor phenomenon, begins to develop early in life (Clance & Imes, 1978; Savickas, 2005). Impostor phenomenon can decrease

career self-concept and adaptability. Additionally, people with impostor phenomenon may have an altered sense of personal fit with job duties when they feel like a fake, a fraud, or they do not deserve their accomplishments and jobs. This misalignment can lead to decreased job satisfaction and satisfaction with job roles, including that as a preceptor.

Limitations

This study sought to identify perceptions of Registered Dietitian Nutritionists in the United States. Dietitians from other countries were outside the scope of this study, as they may have different educational requirements and scopes of practice (International Confederation of Dietetic Associations, n.d.). With over 100,000 RDNs in the United States (Commission on Dietetic Registration, n.d.-c), it would not be feasible to obtain perceptions from all RDNs. In an attempt to obtain a representative sample, a random sample of credentialed practitioners was obtained from the Commission on Dietetic Registration (Academy of Nutrition and Dietetics, n.d.-g).

Although the survey received 560 initial responses, 72 were removed for not answering any questions (51) or answers that were identified as outliers (21). The 30 respondents that only completed demographics were used to compare with the demographics of those who completed the entire survey. An additional 29 respondents completed the demographics and Clance Impostor Phenomenon Scale (CIPS) and were used in evaluation of demographic comparisons as well as prevalence and analyses of impostor phenomenon scores. A total of 429 respondents provided usable data for all research questions.

This study had a low response rate of 5.6%, with only 4.3% of the random sample completing the survey. This low response rate has become more common as people

receive email surveys for everything from shopping experiences, doctor's visits, and academic research projects (Field, 2020; Groves et al., 1992; Kreuter, 2013; Massey & Tourangeau, 2013; Peytchev, 2013). Due to the structured process for survey distribution to a random sample of RDNs, the study was limited to one follow up reminder to increase responses; however, reminder emails could not be targeted to only those who did not respond to the email (Academy of Nutrition and Dietetics, n.d.-g). Multiple reminders and individually targeted emails may have increased response rate if the Academy of Nutrition and Dietetics and Commission on Dietetic Registration would allow for those processes in research projects.

A low response rate could lead to inaccurate assumptions if people who chose not to complete the survey had significantly different responses than those who chose to participate. The alternative to distribution to a random sample of dietitians was the use of a convenience sample. Distributing survey links via social methods is not without its limitations: research links posted on the internet are susceptible to bots (Griffin et al., 2022; Perkel, 2020; Storozuk et al., 2020). Bots are most prevalent in projects that offer incentives to participants. Bots can skew data with responses that are random and do not reflect the opinions of the target demographic. Despite a small response rate, targeted sampling from the Academy of Nutrition and Dietetics was preferred to minimize bot interference.

This survey utilized validated research tools (Chrisman et al., 1995; Spector, 1997) and did not include open-ended questions. Surveys allow for collection of data from large groups of people, which is beneficial when the topic is exploratory and little data are available for the target population. Open-ended questions could have gathered

richer information on the topics of impostor phenomenon, job satisfaction, and use of a mentor. Additionally, questions could have explored more deeply the types of contact that participants had with their mentors; however, as this was one of the first studies to examine possible connections between mentoring, impostor phenomenon, job satisfaction, precepting, and preceptor role satisfaction, it was outside the scope of this study to obtain that level of information.

Implications for Practice

This study shows that the average RDN experiences moderate impostor phenomenon and feels ambiguous about their job satisfaction and the role of a dietetics preceptor. Those who have ever utilized a mentor expressed lower impostor feelings and high job and preceptor role satisfaction. Those currently serving or previously served as a preceptor reported higher job satisfaction than those who have never precepted students.

Professional mentoring relationships may be key to greater satisfaction within the dietetics profession. Dietetics professionals are well educated in the science of nutrition and how to prepare and use foods to promote health. Recent versions of the accreditation standards for dietetics programs included role playing mentoring interactions (Accreditation Council for Education in Nutrition and Dietetics, 2018b, 2018a) and mentoring others(Accreditation Council for Education in Nutrition and Dietetics, 2020, 2021a, 2021b); however, the amount of time dedicated to this in the educational program may not have been enough for current RDNs to feel comfortable precepting current students and peers. Formal training programs for existing practitioners on the role of a mentor could improve the quality of existing mentoring relationships. While the scope of

practice for RDNs includes mentoring students and dietetic interns (Andersen et al., 2018), those mentoring relationships should continue into the professional career.

Dietetics education programs are tasked with developing training for preceptors (Accreditation Council for Education in Nutrition and Dietetics, 2018a, 2018b, 2019). The Accreditation Council for Education in Nutrition and Dietetics has a preceptor training program (Accreditation Council for Education in Nutrition and Dietetics, n.d.-d); however, some preceptors and potential preceptors may not be aware of it. Each educational program is free to interpret the standards and implement them as they please. This may lead to confusion for RDNs who precept for multiple programs. In areas where precepting for more than one program is common, it may be beneficial for programs to streamline their procedures to reduce the burden on preceptors to keep track of different program requirements and expectations.

Developing mentoring programs for preceptors and potential preceptors may help educational programs with recruitment and retention of preceptors. Higher education faculty are already experienced in educating and mentoring adult learners. Additionally, program faculty are the most knowledgeable about educational standards and the way those standards are implemented in specific programs. If dietetics program faculty were to facilitate mentorship programs and relationships, this may increase both job and preceptor satisfaction, leading to a broader pool of preceptors for the program and easing that constraint on program administration.

For employers, formal mentoring relationships among employees may help improve job satisfaction. As new employees are hired, more experienced employees could be encouraged to provide support to those newer employees. Employers could

create appropriate incentive structures as appropriate to the organization to promote the mentor-mentee relationship. These mentoring relationships may occur between supervisors and supervisees; however, they may be more beneficial among people who do not have a direct reporting relationship, as new employees may be hesitant to express impostor feelings and areas of less satisfaction with a person in authority over them.

Mentoring relationships can be a challenge for small employers and entrepreneurs. The Academy of Nutrition and Dietetics has subgroups, many of which provide opportunity for mentoring in a variety of areas, including practice areas and special interests; however, to join these groups you must maintain annual membership to both the Academy of Nutrition and Dietetics and these subgroups (Academy of Nutrition and Dietetics, n.d.-a). Of the nearly 120,000 RDNs (Commission on Dietetic Registration, n.d.-c), just over 51,000 are members of the Academy of Nutrition and Dietetics (Academy of Nutrition and Dietetics, 2023). Barriers to membership include cost (Academy of Nutrition and Dietetics, n.d.-d) and recent negative publicity about financial ties with the food industry (O'Connor, 2022) and lack of diversity (Krishna, 2020). For those who choose not to join the Academy of Nutrition and Dietetics, a multitude of groups are available on social media outlets to help people find connections that could lead to positive mentoring relationships.

Satisfaction with pay was the second lowest facet of job satisfaction for RDNs. This may create a barrier to initiating mentoring relationships. Experienced RDNs may not see the benefits of mentoring to the mentor and be hesitant to give of their time without financial compensation. Newer RDNs are often the lowest paid (Academy of Nutrition and Dietetics, 2021). They may not see the value of investing in a mentoring

relationship or have disposable income to allocate to that area. However, if dietetics education programs could provide mentoring programs as a complementary benefit to preceptors, this may increase the use of mentors within the profession at no additional cost to RDNs, while also increasing the available preceptor pool.

The Academy of Nutrition and Dietetics and Accreditation Council for Education in Nutrition and Dietetics could promote the results of this study related to experience as a preceptor and job satisfaction. Promotional materials and communications with program directors and RDNs could highlight this finding. Employers would be interested to know that higher job satisfaction was reported by those who have been a preceptor, and this could further encourage employers to promote and support their employees to embrace precepting opportunities.

Implications for Research

Replication

This is only the second known study to explore impostor phenomenon and job satisfaction together (Landry et al., 2022). This study could be replicated to strengthen the data available on RDNs. Based on the correlation between Spector's Job Satisfaction Survey (JSS) and the Michigan Organizational Assessment Questionnaire (MOAQ), the shorter MOAQ could be used in future studies that are interested in overall satisfaction.

This study was specifically looking for information about RDNs in general, and therefore ended up with a sample that was predominantly female and non-Hispanic White. Future sampling methods could intentionally seek participants from underrepresented populations to explore differences within subgroups of RDNs and dietetic preceptors.

The Accreditation Council for Education in Nutrition and Dietetics requires preceptors to be experts in their field (Accreditation Council for Education in Nutrition and Dietetics, 2021a, 2021c, 2021b). Preceptors of dietetics students are not required to be RDNs. This study could be replicated in non-RDN preceptors, which can include food service and public health employees.

Future Research Questions

One way to expand this research would be to dive deeper into mentor use. Exploring the nature of the mentoring process, including frequency and method of meeting/ communication may help to further identify best practices for decreasing impostor phenomenon and increasing job and preceptor role satisfaction.

Another expansion of this research could be to hold focus groups or other means of qualitative data collection. This may help researchers to identify specific areas of impostor feelings, job satisfaction, and role satisfaction in precepting. These richer data may help to better inform interventions to combat impostor phenomenon and dissatisfaction with precepting.

Finally, this research can be extended by developing an intervention to pair new and future preceptors with experienced mentors. Satisfaction could be assessed at the beginning and end of the intervention using either the JSS or MOAQ. Pre- and post-intervention impostor phenomenon scores would be assessed with the CIPS. The intervention could include discussions around growth mindset, personality, experiences, the overall roles of a dietetics preceptor, and current challenges that preceptors are facing in their job and role as a preceptor.

Conclusion

This study sought to further explore relationships correlating with job and preceptor role satisfaction. Utilizing the Spector Job Satisfaction Survey, Michigan Organizational Assessment Questionnaire, Clance Impostor Phenomenon Scale, demographic questions, and questions regarding precepting and mentoring experiences, prevalence of impostor phenomenon, job satisfaction, and preceptor role satisfaction were quantified along with correlation among variables. Findings of this study demonstrated mean scores indicating moderate impostor feelings and ambivalent job and preceptor role satisfaction. Correlates of job satisfaction included age, use of a mentor, and lower impostor phenomenon scores. Correlates of preceptor role satisfaction included use of a mentor and lower impostor phenomenon scores.

This is the first known study to quantify preceptor role satisfaction or to explore a relationship between use of a mentor, impostor phenomenon and job or preceptor role satisfaction. These data provide evidence to support developing an intervention to decrease impostor feelings and increase satisfaction. Mentoring sessions could include topics such as adaptability, career self-concept, alignment of personality and experiences with job roles, growth mindset, transitions in job tasks and expectations, and individual challenges that preceptors are facing.

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APPENDICES

APPENDIX A

IRB Approval

NAU NORTHERN ARIZONA UNIVERSITY
Office of Research Compliance

Institutional Review Board for the
Human Research Protection Program

525 S Beaver St
PO Box: 4062
Flagstaff AZ 86011
928-523-9551
https://www.nau.edu/IRB

To:	Jennifer Hernandez, MS
From:	NAU IRB Office
Approval Date:	April 24, 2023
Project:	FACTORS IMPACTING JOB SATISFACTION OF REGISTERED DIETITIAN NUTRITIONISTS WHO DO AND DO NOT PRECEPT STUDENTS
Project Number:	2031317-1
Submission:	New Project
Action:	APPROVED
Project Risk Level:	MINIMAL RISK
Approval Expiration Date:	April 24, 2028
Review Category/ies:	**The project is not federally funded or supported and has been deemed to be no more than minimal risk.**

This project has been reviewed and approved by an IRB Chair or designee.

- Northern Arizona University maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00000357).
- All research procedures should be conducted in full accordance with all applicable sections of the guidance.
- The Principal Investigator should notify the IRB immediately of any proposed changes that affect the protocol and report any unanticipated problems involving risks to participants or others. Please refer to Guidance Investigators Responsibility after IRB Approval, Reporting Local Information and Minimal Risk or Exempt Research.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HRPP Office within IRBNet. If subjects will be consented, the approved consent(s) are available within IRBNet upon approval notification from the HRPP Office.

Important

The principal investigator for this study is responsible for obtaining all necessary approvals before commencing research. Please be sure that you have satisfied applicable external and University requirements, for example (but not limited to) data repositories, listserv permission, records request, data use agreement, conducting University surveys, data security, international, conflicts of interest, biological safety, radiation safety, HIPAA, FERPA, FDA, sponsor approval, clinicaltrials.gov, tribal consultation, or school approval. IRB approval does not convey approval to commence research in the event that other requirements have not been satisfied.

APPENDIX B

Permission to Use Clance Impostor Phenomenon Scale

Hi Andra,

Please see my responses below to your questions. I have also attached the file that was attached to the initiating email.

***Please send us the name/email of your faculty advisor and name/address your university.**

Gretchen McAllister, PhD

Associate Professor, Department of Teaching and Learning

Gretchen.McAllister@nau.edu

Northern Arizona University

College of Education

801 S Knoles Dr.

Flagstaff, AZ 86011

***Please tell us a little more about your research, such as *1) population/sample, *2) how you plan to contact/recruit participants about the research, and *3) how you plan to transmit/administer the CIPS, all in order to ensure secure transmission.**

1 - A list of email addresses for 5000 credentialed nutrition providers will be obtained from the Commission on Dietetic Registration.

2/3 - The survey tool with the copyright/ permission to reproduce clause will be entered into Qualtrics for distribution. The email addresses will also be entered into Qualtrics, and an invitation to participate with a unique survey link will be sent to each potential participant. Two reminder emails will be sent to attempt to maximize the sample size.

Do you have plans on using the English version of the CIPS or do you have plans to translate it into another language? We have some foreign language translated CIPS. If you have plans to translate it yourself, let me know, and I will send further instructions and permissions.

I will only be using the English version of the CIPS.

***Please consent: Given that you may or will be using the CIPS, you must use the terminology "Impostor Phenomenon" rather than Imposter Syndrome in the title of your work.**

I will use the terminology "impostor phenomenon."

***Please consent: If you plan on submitting your research for publication, please first write again (prior to publication submission) for verification of permission conditions of the CIPS.**

I agree (I do not plan to publish the entire scale but will link back to the website if I am able to get a manuscript published).

***Please consent: If you use the CIPS, part of consent is also sending us a full copy of your dissertation/thesis/academic research paper (even prior to publication, if published) for our records only and we will only add its citation to the IP Reference List:**

I agree to submit a copy of my completed dissertation.

***Please consent: If you do any presentations with your research, please send us the citation for the IP Reference List and, if using the CIPS, write for prior permission.**

I agree to send a citation if I do any presentations.

"It appears you may be using non-secure, open-internet social media platforms to advertise your research which we only approve of with the use of a 2-step method:

The complete survey tool will be entered into Qualtrics, which will also be used to recruit a finite list of people. Social media will not be used as a recruitment method.

Thank you for your time and consideration.

Jennifer Hernandez, MS, RDN

Registered Dietitian Nutritionist

PhD student in Curriculum & Instruction

Pauline Rose Clance

8:53 AM (4 hours ago)

to me, andra

I am so glad .Yes, you have my permission to use the scale.

Congratulations, DR. Clance

APPENDIX C

Permission to Use Spector Job Satisfaction Survey

Hello Dr. Spector,

I am a doctoral student embarking on my dissertation exploring job satisfaction and satisfaction in the role of supervising students in practical experiences. I am wanting to use the JSS in my research. I have read the information provided at https://paulspector.com/assessments/pauls-no-cost-assessments/conditions-for-using-these-assessments/ and am happy to share my results.

Thank you for your time and consideration.

Jennifer Hernandez, MS, RDN

Registered Dietitian Nutritionist

PhD student in Curriculum & Instruction

Dear Jennifer:

You have my permission to use the original JSS in your research. You can find copies of the scale in the original English and several other languages, as well as details about the scale's development and norms, in the Paul's No Cost Assessments section of my website: https://paulspector.com. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and

dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation). You also have permission to translate the JSS into another language under the same conditions in addition to sharing a copy of the translation with me. Be sure to include the copyright statement, as well as credit the person who did the translation with the year.

The JSS-2 is an improved commercial version for which there is a fee as explained here: https://paulspector.com/assessments/job-satisfaction-survey-2/.

For additional assessment resources including an archive of measures developed by others, check out the assessment section of my website for organizational measures https://paulspector.com/assessments/ and my companion site for general and mental health measures: https://www.stevenericspector.com/mental-health-assessment-archive/

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector, PhD

Adjunct Professor, School of Information Systems and Management

Muma College of Business

Distinguished Professor Emeritus, Department of Psychology

University of South Florida

Tampa, FL 33620 USA

paul@paulspector.com

Website: https://paulspector.com/

APPENDIX D

Survey Questions

1. Which of the following best describes your professional credential?
    a. Registered Dietitian (RD) or Registered Dietitian Nutritionist (RDN)
    b. Dietetic Technician, Registered (DTR) or Nutrition and Dietetics Technician, Registered (NDTR)
    c. None or other credential
2. Please select your gender identity.
    a. Woman
    b. Man
    c. Trans man
    d. Trans woman
    e. None of the above/ prefer not to answer
3. Are you of Hispanic, Latino, or Spanish origin?
    a. No
    b. Yes
4. Which best describes your race/ ethnicity?
    a. White
    b. Black or African American
    c. Asian
    d. American Indian or Alaska Native
    e. Native Hawaiian or Pacific Islander
    f. Some other race

5. What is the highest degree that you have earned?
    a. Doctorate
    b. Master's degree
    c. Bachelor's degree
6. What is your age in years?
7. Excluding time you might have taken off to return to school, raise a family, or work in other areas, how many total years of work experience do you have in nutrition/dietetics?
8. Which one description most closely matches your primary position (even if the job title differs)?
    a. Clinical Nutrition – Acute Care/ Inpatient
    b. Clinical Nutrition – Ambulatory Care
    c. Clinical Nutrition – Long Term Care
    d. Community and Public Health Nutrition
    e. Management and Executive Leadership (including food service management)
    f. Consultation, Business & Industry, Entrepreneur
    g. Education and Research
    h. Other position not listed
9. Excluding time you might have taken off to return to school, raise a family, or work in other areas, how many total years of work experience do you have in ***the primary practice area*** indicated above?
10. How many total years of work experience do you have in ***your current position?***

11. The Accreditation Council for Education in Nutrition and Dietetics defines a preceptor as “a practitioner who serves as faculty for students/ interns during supervised practice by overseeing practical experiences, providing one-on-one training, and modeling professional behaviors and values” (Commission on Dietetic Registration, n.d.-a, para. 4). Which description best represents your experience as a preceptor for dietetics students?
    a. I have served as a preceptor in the past 12 months.
    b. I have previously served as a preceptor but not in the past 12 months.
    c. I have never served as a preceptor.
12. A mentor is defined as “a person who gives a younger or less experienced person help and advice over a period of time, especially at work or school” or a person with experience in a job who supports and advises someone with less experience to help them develop in their work” (Cambridge Dictionary, n.d.). Which description best represents your experience with a professional mentor?
    a. I currently have someone I consider to be a professional mentor.
    b. I have previously had a professional mentor but do not have one currently.
    c. I have never had someone who I consider to be a professional mentor.
13. Clance IP Scale (Likert scale with responses of 1 = not at all true, 2 = rarely, 3 = sometimes, 4 = often, 5 – very true)
    a. I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task.
    b. I can give the impression that I’m more competent than I really am.
    c. I avoid evaluations if possible and have a dread of others evaluating me.

d. When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future.
e. I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people.
f. I'm afraid people important to me may find out that I'm not as capable as they think I am.
g. I tend to remember the incidents in which I have not done my best more than those times I have done my best.
h. I rarely do a project or task as well as I'd like to do it.
i. Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error.
j. It's hard for me to accept compliments or praise about my intelligence or accomplishments.
k. At times, I feel my success has been due to some kind of luck.
l. I'm disappointed at times in my present accomplishments and think I should have accomplished much more.
m. Sometimes I'm afraid others will discover how much knowledge or ability I really lack.
n. I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.
o. When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.

p. If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done.

q. I often compare my ability to those around me and think they may be more intelligent than I am.

r. I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well.

s. If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.

t. I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement.

Note. From The Impostor Phenomenon: When Success Makes You Feel Like A Fake (pp. 20-22), by P.R. Clance, 1985, Toronto: Bantam Books. Copyright 1985 by Pauline Rose Clance, Ph.D., ABPP. Reprinted by permission. Do not reproduce without permission from Pauline Rose Clance, drpaulinerose@comcast.net, www.paulineroseclance.com.

14. Job Satisfaction Survey (Likert scale with 1 = disagree very much, 2 = disagree moderately, 3 = disagree slightly, 4 = agree slightly, 5 = agree moderately, 6 = agree very much)

    a. I feel I am being paid a fair amount for the work I do.

    b. There is really too little chance for promotion on my job.

    c. My supervisor is quite competent in doing his/her job.

    d. I am not satisfied with the benefits I receive.

    e. When I do a good job, I receive the recognition for it that I should receive.

f. Many of our rules and procedures make doing a good job difficult.

g. I like the people I work with.

h. I sometimes feel my job is meaningless.

i. Communications seem good within this organization.

j. Raises are too few and far between.

k. Those who do well on the job stand a fair chance of being promoted.

l. My supervisor is unfair to me.

m. The benefits we receive are as good as most other organizations offer.

n. I do not feel that the work I do is appreciated.

o. My efforts to do a good job are seldom blocked by red tape.

p. I find I have to work harder at my job because of the incompetence of people I work with.

q. I like doing the things I do at work.

r. The goals of this organization are not clear to me.

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

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

u. My supervisor shows too little interest in the feelings of subordinates.

v. The benefit package we have is equitable.

w. There are few rewards for those who work here.

x. I have too much to do at work.

y. I enjoy my coworkers.

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

aa. I feel a sense of pride in doing my job.

bb. I feel satisfied with my chances for salary increases.

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

dd. I like my supervisor.

ee. I have too much paperwork.

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

gg. I am satisfied with my chances for promotion.

hh. There is too much bickering and fighting at work.

ii. My job is enjoyable.

jj. Work assignments are not fully explained.

15. Michigan Organizational Assessment Questionnaire (Likert scale with 1 = disagree very much, 2 = disagree moderately, 3 = disagree slightly, 4 = agree slightly, 5 = agree moderately, 6 = agree very much). Please respond to the following statements regarding how you feel about your job.
    a. In general, I don’t like my job.
    b. All in all, I am satisfied with my job.
    c. In general, I like working here.
16. (*Question only asked of those who indicated that they are a preceptor or have been in the past*) Michigan Organizational Assessment Questionnaire (Likert scale with 1 = disagree very much, 2 = disagree moderately, 3 = disagree slightly, 4 = agree slightly, 5 = agree moderately, 6 = agree very much). Please respond to

the following statements regarding how you feel about your ***role as a preceptor to dietetics students***.

a. In general, I don't like my role as a preceptor to dietetics students.

b. All in all, I am satisfied with my role as a preceptor to dietetics students.

c. In general, I like being a preceptor.