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Registered Dietitians in School Nutrition Leadership: Motivational Aspects of Job Selection and Job Satisfaction

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Abstract

Purpose/Objectives This study examined motivational aspects related to selecting school nutrition leadership as a career by registered dietitians (RDs). Motivational aspects were defined as valued characteristics which influence individuals' desires for specific work environments. Aspects of job satisfaction were also explored. **Methods** An online questionnaire was distributed to all active members ($n = 219$) of the School Nutrition Services Dietetics Practice Group (SNSDPG) in the Southeast Food and Nutrition Service (FNS) US Department of Agriculture (USDA) region as well as state agency directors ($n = 8$). Questionnaires collected information on motivational aspects influencing RD selection of school nutrition as a career and satisfaction with their leadership positions. **Results** Motivational aspects influencing job selection in school nutrition included attributes such as responsibilities, program requirements, stability, and security. RD job selection was influenced by working for a positive outcome with others ($M = 4.53$, $SD = 0.64$) and impacting childhood obesity prevention ($M = 4.49$, $SD = 0.65$). RD job selection was also influenced by aspects of coworker relationships and be valued by coworkers, as well as having promotion opportunities. Job satisfaction was associated with utilizing skills with employee training ($M = 4.56$, $SD = 0.53$), enjoy working in school nutrition leadership ($M = 4.44$, $SD = 0.69$), impacting the health of school-age children ($M = 4.38$, $SD = 0.58$), and working independently ($M = 4.20$, $SD = 0.88$). **Application to Child Nutrition Professionals** This research provides insight into aspects influencing RDs to consider school nutrition leadership and those job responsibilities that RDs find satisfying. Understanding these aspects may benefit foodservice management and dietetic educators by developing future school nutrition program leadership and marketing this leadership option to RDs. Providing an understanding of what aspects RDs find satisfying in school nutrition leadership may allow for successful recruitment in filling the retirement void.

Keywords

dietitian, job satisfaction, job selection, leadership, school nutrition

Disciplines

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Comments

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ABSTRACT

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Results

Motivational aspects influencing job selection in school nutrition included attributes such as responsibilities, program requirements, stability, and security. RD job selection was influenced by *working for a positive outcome with others* ($M = 4.53$, $SD = 0.64$) and *impacting childhood obesity prevention* ($M = 4.49$, $SD = 0.65$). RD job selection was also influenced by aspects of *coworker relationships* and *be valued by coworkers*, as well as *having promotion opportunities*. Job satisfaction was associated with *utilizing skills with employee training* ($M = 4.56$, $SD = 0.53$), *enjoy working in school nutrition leadership* ($M = 4.44$, $SD = 0.69$), *impacting the health of school-age children* ($M = 4.38$, $SD = 0.58$), and *working independently* ($M = 4.20$, $SD = 0.88$).

Application to Child Nutrition Professionals

This research provides insight into aspects influencing RDs to consider school nutrition leadership and those job responsibilities that RDs find satisfying. Understanding these aspects may benefit foodservice management and dietetic educators by developing future school nutrition program leadership and marketing this leadership option to RDs. Providing an understanding of what aspects RDs find satisfying in school nutrition leadership may allow for successful recruitment in filling the retirement void.

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INTRODUCTION

In 2013, there were 13.02 million breakfasts and 30.4 million lunches provided to a diversity of school-age students through the national school meal programs (USDA, 2013). These federally funded meal programs include the School Breakfast Program and National School Lunch Programs (NSLP) which focus on providing nutritious meals to school-age children (Hinrichs,

2010). As part of the regulations governing meal programs, the Healthy Hunger Free Kids Act (HHFKA) provided for establishment of new nutritional meal standards, as well as standards for maintaining qualified program leadership (Healthy, Hunger-Free Kids Act of 2010, 2010; US Department of Agriculture [USDA], 2010). Registered dietitians (RDs) are often considered for leadership in these programs; RDs possess skills to meet operational challenges in school nutrition by providing nutritious meals to diverse student populations (American Dietetic Association [ADA], 2010a). RDs possessing management competencies are capable of leading federal meal programs. RDs are a good fit for school nutrition program leadership especially because job responsibilities include meeting nutritional meal standards and wellness policy requirements, providing nutrition education, and making medical nutrition therapy available for special needs students (Academy of Nutrition and Dietetics [AND], 2013; ADA, 2010a). Likewise, school nutrition leadership positions could provide positive career opportunities for RDs.

School nutrition program management includes many challenges with preparing nutritious meals for students (ADA, 2010). To meet those challenges, skills are necessary to carry out responsibilities such as financial management, food safety, menu management, food production management, and facility sanitation (Nettles, Carr, & Asperin, 2010; ADA, 2010a). An additional responsibility, improving nutritional status of students, has also been identified as a means to improve student health and academic success (ADA, 2010). Providing food and beverages that meet the 2010 Dietary Guidelines to students during the school day is supported by the American Dietetic Association (ADA, currently known as the Academy of Nutrition and Dietetics (AND)(AND, 2012) and is a major focus for school nutrition leaders. To improve school health environments, the US Department of Agriculture (USDA) implemented new competitive food and beverage standards on July 1, 2014 for food sold to students during the school day (USDA, 2013). This will continue to advance improvement of the healthy school environment and further expand offering healthy food options outside of the school meals program.

In addition to maintaining consistent nutrition standards in schools, maintaining qualified leadership for school nutrition programs is important to ensure program sustainability and integrity. As part of the HHFKA, the USDA recommended establishment of national credential standards for state and local program leadership (USDA, 2010). USDA released a proposed rule with minimum educational hiring standards for local program directors associated with school district size (USDA, 2014). However, there currently is a broad credential range for school nutrition program directors when comparing requirements by states. In 2012, the USDA surveyed 38 state representatives and found that only 2 states reported having professional credentials for school nutrition program directors, state agency directors, and staff (USDA, 2012). As current school nutrition leadership retires, the need for qualified personnel will increase. Thornton (2007) surveyed Southeast USDA region school nutrition directors and found the majority of the respondents were between 51-65 years old at the time of the study, thus indicating possible need for new leadership given upcoming retirements.

Effective school nutrition program implementation requires qualified leadership to direct the operation. Martin and Oakley (2009) defined school nutrition leadership as qualified individuals directing program performance focused on positive program outcomes such as promoting

improved nutritional meal standards. Nettles, Carr, and Asperin (2009) provided ten categories for the specific job responsibilities for qualified district level leadership. However, O'Toole, Anderson, Miller, and Guthrie (2007) found only 37.3% of the states actually had a district approved policy providing specific job responsibilities for the supervisor or coordinators of school nutrition programs. The Centers for Disease Control and Prevention (CDC) 2012 School Health Policies and Practices Study included national responses from 660 school districts where 93.5% of school nutrition coordinators had undergraduate degrees and 64.3% were in nutrition and dietetics (CDC, 2012). Thornton (2007) surveyed HUSSC recognized school district leaders in the Southeast region and found that 78% of participants ($n = 304$) had college degrees.

Attracting and retaining RDs for school leadership positions is important. Thus understanding motivations for selecting and satisfaction with school leadership jobs is needed. Limited knowledge of job satisfaction associated with RDs' management job responsibilities has been studied. Sauer, Canter, and Shanklin (2010) studied the personal and financial responsibilities of RDs with management responsibilities. Findings revealed supervision, coworkers, fringe benefits and nature of the job received the highest job satisfaction scores. District managers and directors demonstrated the highest job satisfaction, when compared to clinical nutrition managers. Given the dearth of research in this area and anticipated need for future leadership in school nutrition, the research objectives for this study included: 1) identify aspects that motivated RDs to select school nutrition leadership as a career, and 2) determine aspects of school nutrition leadership jobs that registered dietitians find satisfying.

METHODOLOGY

Sample

The sample was the Southeast USDA region School Nutrition Services Dietetic Practice Group (SNSDPG) membership. The Southeast USDA region contains the following eight states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. This was selected because five states maintained specific educational credentials for district directors (USDA, 2012); only South Carolina, North Carolina and Tennessee have no educational requirements for district directors (USDA, 2012). A written request was made to AND to receive the list of current members of the SNSDPG for research purposes.

Questionnaire

The questionnaire was developed by the researchers to gather data on aspects that influence RDs to select careers in school nutrition, as well as aspects impacting their satisfaction level. After reviewing literature (Sauer et al., 2010; Hertzberg, 1987; Laramie & Tate, 2012; Puckett et al., 2009; Mathieu, 2009; Chan et al., 2012; Bipp, 2010; Siemens, 2005), an online questionnaire was developed. The questionnaire was reviewed for face validity by a panel of school nutrition experts who were members of SNSDPG outside of the Southeast USDA region. Hardesty and Bearden (2004) recommended a panel of experts affirm face validity prior to distribution. The questionnaire was also validated by five researchers expert in questionnaire development and/or school nutrition prior to pilot testing. The questionnaire was pilot tested with RDs that were members of the Iowa SNSDPG ($n = 10$). The pilot study feedback was used to make minor modifications to the questionnaire.

The questionnaire consisted of 27 questions divided into three sections. The first section (RD selection scale) contained 36 statements (positively and negatively phrased), of which eight

negatively phrased statements were reverse coded following Dillman's (2007) recommendation. This section focused on the aspects influencing RDs to select school nutrition, specifically related to job satisfaction, job responsibilities and career motivational aspects. The response options for the 36 statements were a five point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The second section (RD satisfaction scale) provided 18 statements, four negatively phrased statements were reverse coded, and the same five point Likert-type response scale was utilized. The third section consisted of demographic questions. Demographic questions were put at the end of the questionnaire to prevent participants from becoming disengaged in the questionnaire prior to completion (Dillman et al., 2009). Cronbach's alpha was computed for the RD selection scale and the RD satisfaction scale. The RD selection scale demonstrated good scale reliability with Cronbach's alpha = 0.80 (Cronbach, 1951). The RD satisfaction scale showed reasonable reliability with a Cronbach's alpha of 0.67; there were fewer items included in the job satisfaction scale, potentially impacting the overall reliability (Gliem & Gliem, 2003; Tavakol & Dennick, 2011).

Data Collection

All 219 SNSDPG members in the eight states were contacted through email requesting participation and also sharing of the questionnaire link with other RDs working in school nutrition leadership (e.g. district directors, coordinators, supervisors, managers, and state agency representatives). SNSDPG members were contacted in Alabama ($n = 19$), Florida ($n = 50$), Georgia ($n = 53$), Kentucky ($n = 19$), Mississippi ($n = 17$), North Carolina ($n = 28$), South Carolina ($n = 12$), and Tennessee ($n = 21$). In addition, state agency directors were contacted and asked to share the questionnaire with RDs working in school nutrition in their states. Not every RD working in school nutrition leadership maintains a SNSDPG membership, so state agency directors were contacted to share the questionnaire link with non-SNSDPG members. The online questionnaire was accessible for four weeks through Qualtrics®. Per recommendations of Dillman, Smyth, and Christian (2009), follow up emails were sent to the RD SNSDPG members and the state agency directors seven days after the initial questionnaire requests were distributed. In addition, an email reminder was sent seven days before survey completion deadline. Two \$50 Visa gift cards were offered as an incentive.

Data Analyses

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 19 and JMP version Pro 10 (Cary, North Carolina). Descriptive statistics were used to calculate frequencies, means and standards deviations. For the two Likert-type scale response sections, principal component analysis (PCA) was conducted as a data reduction method in order to reduce the selection and satisfaction statements into a smaller number of representative components and result in grouping those statements based on correlation. By correlating these statements, a single variable was identified representing the statement group. PCA assisted with reducing the questionnaire statements into a smaller number of principal components (variables) representing the aspects influencing RD selection and satisfaction with school nutrition (O'Rourke & Hatcher, 2013). Principal components were determined based on eigenvalues greater than one in combination with the scree plots and the component matrix loading scores.

RESULTS AND DISCUSSION

There were 158 online responses received; however, the response rate for the questionnaire is unknown because of the request to share the questionnaire link with other RDs. Although there were a total of 158 responses, not all participants completed every item which resulted in fewer responses for individual questions on the questionnaire.

Demographic Characteristics

The demographic breakdown of the sample is provided in Table 1. Approximately half (45%) of participants were 51 years or older while 26% of the respondents were in the age range of 22 to 35 years old. Questionnaire results demonstrated a similar demographic trend to results seen in Thornton's (2007) regional study of school nutrition directors. For the school nutrition directors who participated in Thornton's study, 45% were 51 years or older, which supports need for finding qualified individuals to replace retiring school nutrition leaders. Replacing these school nutrition leaders with qualified individuals appears to be a continuing concern for program stability. The 2010 HHFKA also requires the establishment of national credentialing requirements for district and school level leadership (USDA, 2010). The RD credential would effectively meet the proposed credentialing requirement for a bachelor's degree in a school nutrition related field and RDs would provide qualified leaders to fill the upcoming vacancies (USDA, 2014).

Table 1. *Demographic Characteristics of RD sample (N = 145-150)*

Characteristic	n	%
Age (yrs)		
22-25	4	3
26-30	12	8
31-35	23	15
36-40	13	9
41-45	15	10
46-50	15	10
51-55	16	11
56-60	30	20
61+	21	14
Gender		
Female	144	96
Male	6	4
Ethnic group		
White (Non-Hispanic)	121	81
Black or African American	17	11
Hispanic or Latino	4	3
Prefer not to respond	4	3
Other	3	3

Job title		
School nutrition director	58	39
State agency representative	34	23
Other (e.g. consultant, wellness specialist)	22	15
School nutrition coordinator	20	13
School nutrition supervisor	13	9
School nutrition manager	3	2
Years worked in school nutrition		
0-1	16	11
2-5	34	23
6-10	34	23
11-15	22	15
16-20	21	14
20+	22	15
State of employment (219 emails to SNDPG members)		
Alabama	10	7
Florida	36	25
Georgia	50	34
Kentucky	8	6
Mississippi	6	4
North Carolina	18	12
South Carolina	4	3
Tennessee	13	9

Females (96%) were the majority of respondents. The ethnic breakdown of respondents consisted of white (81%), African American (11%), and Hispanic (3%). School nutrition directors (39%) were the largest job title group of the participants with state agency representatives (23%) the next largest group. The smallest job title group was school nutrition managers (2%).

Participants working 2 to 10 years (46%) in school nutrition were the largest percentage of respondents, while 29% responded as having more than 16 years of school nutrition work experience. Participants were not asked whether school nutrition was their first or second employment opportunity; however, with such a large percentage indicating employment of 10 years or less in this field compared with the age demographics, school nutrition may have been their second career. The largest numbers of respondents were from Georgia (34%) and Florida (25%). South Carolina (3%) had the fewest participants.

Principal Components

Principal component analysis (PCA) was conducted to collapse statements best describing the motivational aspects prompting RD participants to select a school nutrition career, as well as those aspects participants found satisfying in school nutrition leadership. The PCA loading scores representing correlation of each scale statement were grouped and labeled with a

statement category associated with comparable job responsibilities, job satisfaction and motivation aspects (O'Rourke & Hatcher, 2013).

Table 2. Principal Component Analysis of RD Selection Statements

Statement: Statement Category	M	SD	Employee Opportunities	Employee Outcomes
Influence others: <i>Benefit others</i>	4.38	0.75	0.750	
Positive outcome: <i>Benefit others</i>	4.53	0.64	0.713	
Make a world difference: <i>Benefit others</i>	4.39	0.68	0.682	
Impact other's health and well being: <i>Health benefit</i>	4.45	0.70	0.706	
Impact on childhood obesity prevention: <i>Health benefit</i>	4.49	0.65	0.614	
Enjoy managing school nutrition operation: <i>Personal benefits</i>	3.99	0.81	0.642	
Enjoy managing school nutrition program: <i>Personal benefits</i>	4.26	0.73	0.632	
Satisfied with school nutrition leadership position: <i>Personal benefits</i>	3.99	0.80	0.602	
Enjoy achieving positive financial results: <i>Personal benefits</i>	4.05	0.74	0.578	
Interested in job: <i>Personal benefits</i>	4.47	0.74	0.501	
Utilize nutrition training: <i>Provide training</i>	4.29	0.69	0.518	
Work with others: <i>Engage others</i>	4.30	0.61	0.515	
Professional challenge: <i>Develop skills</i>	4.38	0.93	0.488	
Foodservice leadership skills: <i>Develop skills</i>	3.95	0.90	0.467	
Be valued: <i>Coworker</i>	3.72	0.93		0.796
Relationship: <i>Coworker</i>	3.97	0.92		0.686
Understanding: <i>Coworker</i>	3.54	0.89		0.643
Mentored by school nutrition leaders: <i>Coworker</i>	3.50	1.07		0.592
Promotional opportunities: <i>Promotion</i>	3.89	1.00		0.672
Better promotion opportunities: <i>Promotion</i>	3.33	0.92		0.538
Professional skills: <i>Utilize skills</i>	4.04	0.80		0.601
Professional leadership skills: <i>Utilize skills</i>	4.17	0.78		0.529
Focus on customer satisfaction: <i>Utilize skills</i>	4.22	0.76		0.435
Clinical dietetic knowledge: <i>Utilize skills</i>	3.63	1.08		0.432

RD Selection Scale

Table 2 provides the principal components for the RD selection scale, “employee opportunities” and “employee outcomes”. Descriptive statistics including means and standard deviations for each statement were used for comparison. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) measures vary between 0 and 1; KMO values close to 1 indicate more compact correlation values resulting in reliable components. KMO values between 0.70 and 0.80 are considered good (Kaiser, 1970). The KMO for the RD selection statements was 0.763

therefore demonstrating that PCA was an appropriate data analysis method. Bartlett's test of sphericity examined if the covariances were 0 and the equality of the variances (Field, 2005). The Bartlett's test results were significant ($p = 0.000$) demonstrating the variance equality. Ten statements were excluded because of low component loading values. Component matrix values greater than 0.40 were used to identify the statements associated with each component (Guadagnoli & Velicer, 1988).

Responses were given on 5 point Likert- type scale (1 = strongly disagree to 5 = strongly agree). Two principal components were identified for the RD selection scale. The first principal component was labeled "employee opportunities", and examples of statements that loaded on this component are those which benefited others, as well as providing health and personal benefits. There were 14 statements that loaded to the "employee opportunities" component. *Influence others* had the largest loading scores (0.750) under the first component and *positive outcome* had the largest mean scores ($M = 4.53$, $SD = 0.63$). *Impact on childhood obesity prevention* had the second largest mean score ($M = 4.49$, $SD = 0.65$).

The "employee outcome" component had 10 statements loaded on it and the statements were grouped under subheadings of coworkers, promotion and utilize skills. *Focus on customer satisfaction* had the largest mean score ($M = 4.22$, $SD = 0.76$) and the second lowest loading score (0.435). *Be valued* had the largest loading score (0.796) for this second component.

Based on the responses provided on the RD selection scale, it appears that statements categorized as *benefit others* and *health benefits* reflected aspects that impacted RDs selection of school nutrition. The statements associated with *coworkers* and *promotion opportunities* in school nutrition demonstrated high component loading scores, but the statements mean scores were low. These aspects contributed to RD selection, but had lower mean scores indicating they were less influential selection aspects for current RDs in school nutrition leadership.

RD Satisfaction Scale

Table 3 (RD satisfaction scale) shows the PCA results with two principal components, "job attributes" and "job preferences". The KMO for RD job satisfaction scale was 0.722, also demonstrating that PCA was an appropriate data analysis method for this scale because the KMO value was above 0.70 (Kaiser, 1970). The Bartlett's test for sphericity also demonstrated a significant equality of variance ($p = 0.000$). The first component was labeled "job attributes" (e.g. security, stability, program requirements and satisfaction) and there were seven satisfaction statements that loaded on it. The second component was labeled "job preference" (e.g. utilize skills, independence and challenges), with seven satisfaction statements loaded on it. The statement with highest mean score under job attributes was *enjoy working in school nutrition leadership* ($M = 4.44$, $SD = 0.69$) and the largest loading score was for the *job security* statement (0.757) under job attributes. These statements relate to the motivational influences associated with Herzberg's and Maslow's motivational theories (Kovach, 1987). Appealing to these motivational influences associated with school nutrition leadership may encourage future RDs to consider this career option.

In addition, the highest mean score under "job preference" was the *employee training* statement ($M = 4.56$, $SD = 0.53$) and also the highest loading score (0.538). The responses on the RD

satisfaction scale indicated RDs have satisfaction in their positions associated with *providing employee training, having a health impact on school-age children, enjoy working in school nutrition leadership, working independently, and utilize their dietetic skills*. Future dietitians may be encouraged to consider this option and discover the beneficial application of their dietetic expertise, if current areas of RD satisfaction with school nutrition leadership are promoted. Marketing these areas to dietetic students may present an accurate representation of the aspects associated with school nutrition leadership positions, resulting in their consideration of this career option.

Table 3. Principal Component Analysis of RD Satisfaction Statements

Statement: Statement category	M	SD	Job Attributes	Job Preference
Job security: <i>Security</i>	3.83	0.94	0.757	
Work environment: <i>Stability</i>	3.61	0.88	0.654	
Managing requirement changes: <i>Program requirements</i>	4.00	0.83	0.583	
Salary appropriate: <i>Satisfaction</i>	3.18	1.22	0.540	
Enjoy working in school nutrition leadership: <i>Satisfaction</i>	4.44	0.69	0.503	
Financial aspects: <i>Responsibilities</i>	3.85	0.91	0.539	
Personnel management: <i>Responsibilities</i>	3.92	0.90	0.514	
Employee training: <i>Utilize Skills</i>	4.56	0.53		0.538
Food and equipment bids: <i>Utilize Skills</i>	3.05	1.03		0.532
Utilize dietetic skills: <i>Utilize Skills</i>	4.15	0.82		0.496
Working independently: <i>Independence</i>	4.20	0.88		0.520
Program regulations: <i>Challenges</i>	4.01	0.83		0.511
Program changes: <i>Challenges</i>	4.03	0.97		0.461
School-age children: <i>Health impact</i>	4.38	0.58		0.476

Cronbach $\alpha = 0.67$ for entire RD satisfaction scale.

Responses given on 5 point Likert-scale (1 = strongly disagree to 5 = strongly agree)

CONCLUSIONS AND APPLICATION

Of RDs who participated in the questionnaire, 45% were 51 years or older, which supports the concern for finding qualified individuals to replace these school nutrition leadership positions. Thirty-six percent had 5 years or less of experience, while 43% of respondents had 16 or more years of experience. This demonstrates that over one-third of this sample was relatively new to school nutrition. Replacing retiring school nutrition leadership with qualified individuals to meet program challenges will be important to maintain qualified program leadership. Current challenges associated with student meal acceptance such as continued reduction of menu sodium levels and inclusion of 100% whole grain foods requires skilled leadership to effectively implement program regulations. In addition, the knowledge deficit created by the loss of experienced current leadership could impact program standards, making the need to recruit qualified individuals extremely important.

RD Selection

Considering the aspects identified from this research, RDs selected school nutrition leadership because of the benefits to others, specifically the influence on others, positive outcomes and making a difference in the world. Positive student health and academic outcomes result from provision of nutritious school meals (Hinrichs, 2010). Providing nutrition education in conjunction with healthy school meals could improve student health long term, impacting future adult health and making an important difference (ADA, 2010a). RDs are qualified to plan and provide this necessary nutrition education to students.

RDs in this study also selected school nutrition based on coworker aspects such as being valued and understood by coworkers, which is similar to the satisfaction score results seen with RDs in Sauer et al. (2010). Opportunities exist for school nutrition leadership to work together to successfully implement program changes and also to develop relationships with school nutrition coworkers resulting in improved job satisfaction. School nutrition leadership recruitment should include these aspects to appeal to qualified individuals such as RDs. Marketing focused on the aspects identified in this study may result in an increased interest level of RDs consideration of school leadership nutrition positions, filling the developing deficit resulting from retiring program leadership.

RD Satisfaction

Understanding RD satisfaction in school nutrition leadership may be valuable in appealing to RDs working in other leadership areas outside of school nutrition and also with future recruitment of dietetic students. Utilizing dietetic skills, providing employee training, and handling the specific job responsibilities such as financial aspects, personnel management and budget oversight also contributed to RD satisfaction in this study. These results reinforced Rhea and Bettles' (2012) findings that school nutrition leadership provides a good career opportunity for RDs. Effective training of school nutrition staff is necessary to ensure consistent regulation implementation at the school level. Higher nutrition standards associated with whole grain foods, and expansion of fruit and vegetable servings have increased tray costs, making cost effective menu management crucial for program financial stability. Also when considering the nutritional expertise required to not only meet improved program nutritional standards but also support therapeutic student needs associated with special diets and food allergies, dietetic skills and knowledge possessed by RDs are necessary. In many cases, school districts without RDs may require outside support from consulting RDs to provide services at an added cost to the school district. School nutrition leadership possessing RD credentials could effectively handle all job responsibilities associated with program management, and enjoy good job satisfaction.

A better understanding of these selection and satisfaction aspects and the desire to develop interest in school nutrition by promoting these aspects may encourage RDs to pursue this area. RD leadership would continue to provide important expertise benefiting continued program focus on improving school meal nutritional standards, meeting specialized needs of a diverse student population and ultimately contributing to continued efforts toward creating a healthy school environment.

Limitations

There were a few limitations of this study, including that it was conducted in only one of the seven USDA regions, with states that currently have higher educational requirements for the school nutrition leadership, and therefore results may not be generalizable. Also only members of the SNSDPG and state agency directors were contacted, although they were asked to share the questionnaire; therefore RDs that were not members of these two groups were potentially excluded. There may be benefits to expanding to other USDA regions and groups to collect a broader range of responses.

Future Research

Additional research to examine exposure and preparation of dietetic students in these selection and satisfaction aspects may increase student awareness of this career option, and ultimately encourage consideration of school nutrition leadership as an area to apply the knowledge and skills developed as a result of undergraduate education and internships. Recruitment of RDs who are qualified to meet the program needs for effective school nutrition leadership is needed. Once a better understanding of national selection and satisfaction aspects is achieved, and program exposure is prioritized, more qualified RDs could be influenced to consider school nutrition leadership. Marketing selection and satisfaction aspects identified in this research associated with school nutrition leadership may appeal to RDs considering a career change. Presenting realistic representations of these aspects, allowing mentoring opportunities for dietetic students, and having RD school nutrition leaders as preceptors for dietetic practice experiences may result in greater consideration of school nutrition careers. The importance of appealing to qualified RDs during recruitment to fill the developing school nutrition leadership vacancies should be pursued by school districts seeking to maintain highly qualified leaders for their school nutrition programs.

REFERENCES

- Academy of Nutrition and Dietetics. (2013). *Qualifications of a Registered Dietitian. FAQs about program definitions*. Retrieved from <http://www.eatright.org/HealthProfessionals/content.aspx?id=6857>
- Academy of Nutrition and Dietetics. (2012). Press Release: Journal of the American Dietetic Association becomes Journal of Academy of Nutrition and Dietetics. Retrieved from <http://www.eatright.org/Media/content.aspx?id=6442467818#.VATJzNddV8E>
- American Dietetic Association. (2010). Position of the American Dietetic Association: Local support for nutrition integrity in schools. *Journal of the American Dietetic Association, 110*, 1244-1254. doi:10.1016/j.jada.2010.06.014
- American Dietetic Association. (2010a). Position of the American Dietetic Association, School Nutrition Association, and Society for Nutrition Education: Comprehensive school nutrition services. *Journal of the American Dietetic Association, 110*, 1738-1749. doi:10.1016/j.jada.2010.08.035
- Bipp, T. (2010). What do people want from their jobs? The big five, core self-evaluations and

work motivation. *International Journal of Selection and Assessment*, 18, 28-39.

Centers for Disease Control and Prevention. (2012). *School Health Policies and Practices Study*. Retrieved from <http://www.cdc.gov/healthyouth/shpps/>

Chan, K., Ho, M., Chernyshendko, O., Bedford, O., Uy, M., Gomulya, D., Sam, Y., & Phan, W. (2012). Entrepreneurship, professionalism, leadership: A framework and measure for understanding boundaryless careers. *Journal of Vocational Behavior*, 81, 73-88. doi:10.1016/j.jvb.2012.05.001

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.

Dillman D. (2007). *Main and Internet surveys: The tailored design method*. New Jersey: John Wiley & Sons, Inc.

Dillman, D., Smyth, J., & Christian, L. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. New Jersey: John Wiley & Sons, Inc.

Field, A. (2005). Exploratory factor analysis. In Wright, D. (Ed.), *Discovering statistics using SPSS* (pp. 619-680). London: SAGE.

Gliem, J., & Gliem, R. (2003, October). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Paper presented at the Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, The Ohio State University, Columbus, OH.

Guadagnoli, E., & Velicer, W. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, 103, 265-275.

Hardesty, D., & Bearden, W. (2004). The use of expert judges in scale development: Implications for improving face validity of measures of unobservable constructs. *Journal of Business Research*, 57, 98-107. doi:10.1016/S0148-2963(01)00295-8

Healthy, Hunger-Free Kids Act of 2010. 42 U.S.C. § 1751 et seq. (2010).

Hertzberg, F. (1987). One more time: How do you motivate employees? *Harvard Business Review*, 65, 109-120.

Hinrichs, P. (2010). The effects of the National School Lunch Program on education and health. *Journal of Policy Analysis and Management*, 29, 479-505. doi:10.1002/pam

Kaiser, H. (1970). A second-generation little jiffy. *Psychometrika*, 35, 401-415.

Kovach, K. (1987). What motivates employees? Workers and supervisors give different answers. *Business Horizons*, 30, 58-65. doi:10.1016/0007-6813(87)90082-6

- Laramee, S., & Tate, M. (2012). Dietetics workforce demand study task force supplement: An introduction. *Journal of the Academy of Nutrition and Dietetics*, 112, S7-S9. doi:10.1016/j.jand.2011.11.015
- Martin, J., & Oakley, C. (2009). *Managing child nutrition programs*. Sudbury, Massachusetts: Jones & Bartlett Publishers, Inc. (pp. 3-137).
- Mathieu, J. (2009). Moving into management. *Journal of the American Dietetic Association*, 109, S20-S21. doi:10.1016/j.jada.2009.03.032
- Nettles, M., Carr, D., & Asperin, A. (2009). *Competencies, knowledge, skills for district-level school nutrition professionals in the 21st Century*. National Food Service Management Institute. Retrieved from <http://www.nfsmi.org/documentlibraryfiles/PDF/20090514085653.pdf>
- O'Rourke, N., & Hatcher, L. (2013). *A step-by-step approach to using SAS® for factor analysis and structural equation modeling (2nd ed.)*. Cary, North Carolina: SAS Institute. (pp. 1-44).
- O'Toole, T., Anderson, S., Miller, C., & Guthrie, J. (2007). Nutrition services and foods and beverages available at school: Results from the School Health Policies and Programs Study 2006. *Journal of School Health*, 77, 500-521. doi:10.1111/j.1746-1561.2007.00232
- Puckett, R., Barkley, W., Dixon, G., Egan, K., Koch, C., Malone, T., . . . Theis, M. (2009). American Dietetic Association standards of professional performance for Registered Dietitians (generalist and advanced) in management of food and nutrition systems. *Journal of the American Dietetic Association*, 109, 540-543e13. doi:10.1016/j.jada.2009.01.014
- Rhea, M., & Bettles, C. (2012). Future changes driving dietetics workforce supply and demand: Future scan 2012-2022. *Journal of the Academy of Nutrition and Dietetics*, 112, S10-S24. doi:10.1016/j.jand.2011.12.008
- Sauer, K., Canter, D., & Shanklin, C. (2010). Job satisfaction of dietitians with management responsibilities: An exploratory study supporting ADA's research priorities. *Journal of the American Dietetic Association*, 110, 1432-1440. doi:10.1016/j.jada.2010.08.024
- Siemens, L. (2005). Motivation in a global economy: Lessons from Herzberg. *Canadian Public Administration*, 48, 413-419. doi:10.1111/j.1754-7121.2005.tb00232
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2; 53-55. doi:10.516/ijme.4dfb.8dfd
- Thornton, J. (2007). *Factors influencing the effectiveness of school foodservice programs*. (Doctoral dissertation). Iowa State University, Ames, Iowa.
- US Department of Agriculture, Food and Nutrition Service. (2010). *Healthy Hunger-Free Kids Act of 2010 Public Law 111-296*. Retrieved from http://www.fns.usda.gov/cnd/Governance/Legislation/CNR_2010.htm

US Department of Agriculture, Food and Nutrition Service. (2013). *Program Information Report U.S. Summary FY2013-FY2014*. Retrieved from <http://www.fns.usda.gov/sites/default/files/November%202013%20data.pdf>US

US Department of Agriculture, Food and Nutrition Service. (2014). *7CFR Parts 210 and 235-Professional standards for state and local school nutrition programs personnel as required by the Healthy, Hunger-Free Kids Act of 2010; Proposed rule*. Retrieved from <http://www.fns.usda.gov/sites/default/files/CN2014-0130.pdf>

US Department of Agriculture. (2013). *Parts 210 and 220-National School Lunch Program and School Breakfast Program; Nutrition standards for all foods sold in school as required by the Healthy, Hunger-Free Kids Act of 2010; Interim final rule*. Retrieved from <http://www.gpo.gov/fdsys/pkg/FR-2013-06-28/pdf/2013-15249.pdf>

US Department of Agriculture. (2012, February). *USDA's summary of the state agency survey regarding professional standards*. Provided by Catherine Strohbehn, HRIM Extension Specialist/Professor, Iowa State University on April 15, 2013.

US Department of Agriculture. (2013). *Parts 210 and 220-National School Lunch Program and School Breakfast Program; Nutrition standards for all foods sold in school as required by the Healthy, Hunger-Free Kids Act of 2010; Interim final rule*. Retrieved from <http://www.gpo.gov/fdsys/pkg/FR-2013-06-28/pdf/2013-15249.pdf>

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