

Examining the Relationship Between Dietitians' Lifelong Learning Tendencies and Their Job Satisfaction

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Abstract

Objectives: Our study aimed to examine the relationship between lifelong learning tendencies and job satisfaction of dietitians who provide consultancy to individuals by using their knowledge and skills to ensure their health.

Materials and Methods: This cross-sectional study was conducted between 15.06.2024 and 15.10.2024 with actively working dietitians aged 22-65. Data were collected from 300 dietitians via an online survey. The Lifelong Learning Competency Scale (LLCS) is used to determine their perceptions of competence towards the lifelong learning approach. The Minnesota Job Satisfaction Scale (MSQ) included questions about the sub-factors of internal and external satisfaction and job satisfaction.

Results: The study included 91.0% women and 9.0% men. Dietitians working in clinics had higher scores for both job satisfaction and lifelong learning tendencies ($p<0.05$). In terms of total job satisfaction score, the average of private sector employees is significantly higher than public employees ($p<0.001$). A correlation was also found between the total scores and sub-dimensions of MSQ and LLCS ($p<0.001$). While factors such as age, professional experience, and field of study did not have a significant effect on job satisfaction, working in the private sector ($p<0.05$), and lifelong learning tendency showed a significant relationship ($p<0.001$).

Conclusion: Clinical dietitian job satisfaction is positively affected by both the tendency for lifelong learning and working in the private sector is associated with greater job satisfaction. It would be useful to develop strategies to increase the satisfaction of dietitians working in areas such as polyclinics and refectories or in the public sector.

Keywords: *dietitians, job satisfaction, lifelong learning*

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Introduction

Job satisfaction can be defined as the pleasure and happiness that an individual gets from their work. In order to ensure job satisfaction, the quality of work life must be increased, working conditions and environment must be arranged, and problems that may arise at any time in work life must be minimized (Erşan et al., 2013). In general, higher levels of education, professional expertise, and experience, competitive compensation, rewards, and benefits, a pleasant and supportive physical and social work environment, opportunities for promotion and advancement, personal goal achievement, professional growth, occupational status, autonomy, and meaning are associated with higher levels of job satisfaction (van den Berg et al., 2024).

Lifelong learning is an important element for the self-development of the individual. People who learn and equip themselves throughout their lives will be important actors in social progress. Job satisfaction is related to how much satisfaction individuals get from their work. Job satisfaction is a factor that has positive effects on the individual's productivity in work life and desire for lifelong learning (Torun & Güvercin-Seçkin 2021). Many people lose their sense of purpose when committing to routine tasks and using repetitive and static skills. These individuals must reflect on their interests and personal strengths and regain their sense of professionalism. When a professional lacks interest in their work, lack commitment to their daily tasks, and lack a desire for lifelong learning, they become a risk to the people they treat or counsel and to the image of the profession they represent. To keep up with the pace of technology and changes in food, nutrition, and health, it is vital that lifelong learning includes developing an action learning plan. In today's action learning plan, learning styles can change and individuals must be open to trying new ways of learning (Petrillo, 2003).

Dietitians are professionals in the field of nutritional sciences who provide nutritional guidance, food service management, and nutritional management with specialized knowledge and skills to a variety of populations, including the sick, healthy, and elderly. Additionally, "dietitians" are professionals who primarily provide nutritional guidance and food service management to healthy individuals. Due to lifestyle changes, health conditions such as cancer and cardiovascular diseases are increasing with the aging of the population. In the strategic shift to population-based primary prevention, registered dietitians and dietitians are expected to play a more active role. As a result, their workloads have increased and their duties have become more diverse, leading to concerns that stress levels may be increasing (Yaginuma-Sakurai et al., 2024).

Adults often must “learn to learn” and adapt as their careers progress. The variety and methods used for continuing professional education must increase to meet the needs of dietetic professionals (Petrillo, 2003). There is little information in the literature about lifelong learning or experience of increasing professional knowledge for dietetic professionals (Wallace, 2014). In the limited number of studies to determine the job satisfaction of dietitians; it has been stated that while high job satisfaction is generally achieved in the case of being a clinical dietitian, the satisfaction level in terms of income is low (Um et al., 2018). It has been shown that the management skills, communication, teamwork and time management skills of dietitians with management responsibilities help to increase job satisfaction (Rusali et al., 2020) and job satisfaction is higher in dietitians working as managers (Kim & Lee, 2014).

Job satisfaction among dietitians increases with the length of experience and participation in professional scientific meetings, and job satisfaction decreases as the number of outpatients increases (Dağ et al., 2019). In a dietitian career, learning the thoughts of dietitians about their work is seen as a priority (Sauer et al., 2010). A study in South Africa found that registered dietitians and nutritionists experienced low job satisfaction. In particular, dietitians and nutritionists working primarily in the public health sector had significantly lower job satisfaction in terms of salaries, promotion opportunities, and resource availability than those working in the private health, higher education, and research sectors (van den Berg et al., 2024). A study conducted with psychiatrists found that there was a significant correlation between career satisfaction and participation in lifelong learning and scientific activities (Afonso et al., 2014). In another study conducted by Alonderiene (2010), it was reported that there was a statistically significant relationship between informal learning processes and job satisfaction (Alonderiene, 2010). In a review article, continuing professional education is emphasized as an important principle of professional development and nutrition and dietetics science. It was also emphasized that today's continuing professional education in nutrition and dietetics should focus more on interprofessional education to benefit healthcare teams and quality care outcomes. The United States Commission on Dietetic Registration and the Academy of Nutrition and Dietetics promote lifelong learning and continuing skill development and professional growth in dietitians. Nutrition and dietetics professionals can benefit from a more comprehensive understanding of changes in continuing education and the opportunities they can offer to contribute to the future of the profession (Gonzalez et al., 2023). The lifelong learning strategies of dietitians are also supported by The European Federation of Dietitians Associations. The published committee report said that a commitment to lifelong learning

increases accountability and professionalism in the field of nutrition and dietetics (McCullough et al., 2023)

The relationship between lifelong learning and job satisfaction can affect the nutrition education that dietitians provide to their patients. At the same time, examining these two issues together is important in positively supporting dietitians' working lives. While there is literature on the job satisfaction of other health care professional groups, there are limited studies on the job satisfaction of dietitians. In addition, no literature study investigates the relationship between lifelong learning tendency and job satisfaction in dietitians. It is thought that determining the job satisfaction of dietitians can contribute to improving individuals' quality of life and the nutritional and health status of society. In this study, it was aimed to examine the relationship between lifelong learning tendency and job satisfaction of dietitians who provide consultancy to individuals by using their knowledge and skills for their health.

Materials and Methods

Research Design and Characteristics of Participants

This cross-sectional study aimed to investigate the relationship between job satisfaction and lifelong learning among dietitians working in Turkey. Regardless of their professional experience, dietitians who graduated from the Nutrition and Dietetics departments, are actively working and working in Turkey, and are between the ages of 22-65 were included in the study. The study data were collected between 15.06.2024 and 15.10.2024 via an online survey. The sample size was calculated as 245 using the simple random method (Raosoft, 2024), and 300 dietitians were reached. All procedures were conducted by the Declaration of Helsinki, and this study has been approved by the Bitlis Eren University Ethical Principles and Ethics Committee (approval number: 2024/05-7). Data of those who did not complete the survey incompletely were removed from the study. In this survey, an informed consent-style statement was added to the beginning of the survey and the questions were not allowed to be viewed without checking the 'I agree to participate in the study' button. Some dietitians were contacted via e-mail and surveys were sent, while others were reached via mobile phones, groups or social media. Changes to the questions in the survey were made only by the researchers and the results were not shared with anyone other than the researchers.

Data Collection

In our study, participants were asked about their master's and doctorate degrees, institution, work type, reason for choosing the profession, type of institution they work in, work

experience, and sociodemographic characteristics in addition to their personal information. The Lifelong Learning Competency Scale (LLCS) is used to determine their perceptions of competence towards the lifelong learning approach. With the lifelong learning competence scale; self-management competencies, learning-to-learn competencies, initiative, and entrepreneurship competencies, competencies for obtaining information, digital competencies, and decision-making competencies were questioned. The Minnesota Job Satisfaction Scale (MSQ) included questions about the sub-factors of internal and external satisfaction and job satisfaction.

Data Collection Tools

Lifelong Learning Competency Scale (LLCS)

The lifelong learning competency scale consists of 51 items and six sub-factors. It is a 5-point Likert-type scale. 5-point Likerts consist of the options “none”, “little,” “medium,” “a lot,” and “full.” These options are calculated by giving numerical values from 1 to 5. These sub-factors are; self-management competencies, learning-to-learn competencies, initiative and entrepreneurship competencies, knowledge acquisition competencies, digital competencies, and decision-making competencies. Self-Management Competencies; It consists of the following items: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, learning to learn competencies 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, initiative and entrepreneurship competencies 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, information acquisition competencies 36, 37, 38, 39, 40, 41, digital competencies 42, 43, 44, 45, 46, 47, and decision-making competencies 48, 49, 50, 51. The development of the scale and its validity and reliability was done by Uzun Boylu and Hürsen ($\alpha_{\text{Cronbach}} = 0.95$) (Uzunboyu & Hürsen, 2011).

Minnesota Job Satisfaction Scale (MSQ)

The short form of the Minnesota Job Satisfaction Scale consists of 20 items and 2 subfactors. The scale, which was developed in a 5-point Likert type, consists of the options “not satisfied at all”, “not satisfied”, “undecided”, “satisfied” and “very satisfied”. It was calculated by giving numerical values from 1 to 5 to these options. Scale subfactors consist of intrinsic satisfaction and extrinsic satisfaction. The scores obtained from scale items vary between 20 and 100. A score below 25 indicates low job satisfaction, 26 - 74 indicates normal job satisfaction and 75 and above indicates high job satisfaction. Intrinsic satisfaction items are items 1, 2, 3, 4, 7, 9, 10, 11, 15, 16, 18, and 20. Intrinsic satisfaction items consist of intrinsic elements such as success, the job itself, responsibility for the job, and duties related to promotion and advancement. Extrinsic satisfaction items are; 5, 6, 8, 12, 13, 14, 17, and 19.

The items of external satisfaction consist of elements outside the person such as institutional policy and management, supervision style, manager, work and relations with subordinates, working conditions, recognition or appreciation, and wages. The factors originating from the person himself constitute internal satisfaction, while the factors originating from external factors constitute external satisfaction. The scale was developed by Weiss et al., (Weiss et al., 1967), and its Turkish validity and reliability were performed by Baycan (Baycan, 1985).

Statistical Analysis

For statistical analyses, SPSS for Windows version 22.0 package program was used and $p < 0.05$ was accepted as statistically significant. The number of participants (n), and percentage (%) were evaluated; the arithmetic mean, and standard deviation ($\bar{x} \pm S$) were calculated. Kolmogorov Smirnov test was used to control the conformity of scale scores to normal distribution. After analyzing the conformity of variables to the normal distribution, arithmetic mean \pm standard deviation was used for normally distributed variables in descriptive analyses. Normally distributed data were evaluated with parametric, and non-normally distributed data were evaluated with non-parametric statistical tests. Comparison of scale scores Relationships were tested with Spearman correlation analysis. In the analyses examining the differences between the groups, the difference between two groups was analysed with an independent sample t-test, and the difference between more than two groups was analysed with a one-way analysis of variance (ANOVA), and the Bonferroni post-hoc test, where the variances were distributed homogeneously, was applied to determine which groups had significant differences between the groups. Logistic regression analysis was performed to examine the factors affecting job satisfaction, and a scatter plot was used to show the relationship between job satisfaction and lifelong learning competence.

Results

Table 1 presents the demographic characteristics of dietitians and the reasons for choosing their profession. Of the 300 dietitians who participated in the study, 91.0% were women. Dietitians with a master's degree were 73.3%, while 4.7% had a doctorate. When the professional experience of dietitians was examined, 40% had 0-1 year and 13.3% had 10 years and above.

Dietitians mostly work full-time (64.3%). While 70.7 percent of them work in the private sector, the majority also work in clinics (49.0%), and polyclinics (30.0%). Reasons for

choosing a profession are listed as being in the health sector (32.3%) and not having a specific reason (25.7%).

Table 1. Distribution of Dietitians According to Their General Characteristics and Reasons for Choosing the Profession

Variables	Noun (n)	Percentage (%)
Gender		
Female	273	91.0
Male	27	9.0
Postgraduate Education		
Yes	80	26.7
No	220	73.3
Doctoral Education		
Yes	14	4.7
No	286	95.3
Professional Experience		
0-1 year	120	40.0
1-5 years	102	34.0
5-10 years	38	12.7
≥10 years	40	13.3
Work Type		
Full-time	193	64.3
Variable	84	28.0
Part-time	23	7.7
Institution Type		
Private sector (employer and employee)	212	70.7
Public sector	88	29.3
Work Area		
Clinic	147	49.0
Polyclinic	90	30.0
Refectory	26	8.7
Rotational work	16	5.3
Other	21	7.0
Reasons for Choosing the Profession		
Because it is in the healthcare sector	97	32.3
Interest in the profession	77	25.7
No specific reason	33	11.0
It is a promising profession	23	7.7
Recommendation	17	5.7
To raise public awareness	16	5.3
Ease of working conditions	12	4.0
To learn healthy eating	9	3.0
Other	7	2.1
Desire to become an academic	4	1.3
Job Opportunity	4	1.3

Table 2 compares the LLSC and MSQ scores according to the fields in which dietitians work. The mean score for the MSQ total score was the highest in the clinic group, and this difference was due to dietitians working in the polyclinic and refectory ($p<0.001$). In terms of intrinsic job satisfaction, the clinical group had the highest score compared to dietitians working in polyclinics, cafeterias, and other institutions (sports dietitians, administrative positions, school and municipality dietitians) ($p<0.001$). The external job satisfaction score was also higher in dietitians working in clinics than in those working in polyclinic ($p=0.008$). When the total score of the lifelong learning competencies scale, self-management competencies, and learning-to-learn competencies sub-dimensions were evaluated, the scores in the clinic group were significantly higher than in the polyclinic group ($p<0.05$).

Table 3 shows the LLSC and MSQ scores of dietitians according to their place of employment. In terms of MSQ total score, the average of private sector employees is significantly higher than public employees ($p<0.001$). Internal and external satisfaction scores were also higher in dietitians working in the private sector ($p<0.001$, $p=0.012$). In terms of the sub-dimension of lifelong learning competencies, digital competencies were found to be higher in the private sector ($p=0.014$). However, no significant difference was observed in terms of other competencies (self-management, learning to learn, entrepreneurship) ($p>0.05$).

Table 2. Evaluation of the LLSC and MSQ Scoring According to the Fields in Which Dietitians Work

Variables	Fields	n	$\bar{X} \pm SS$	F	p
MSQ	Clinic ^a	147	81.72 ± 12.37	5.622	<0.001
	Polyclinic ^b	90	75.32 ± 11.78		
	Refectory ^b	26	74.11 ± 14.74		
	Rotational work	16	73.87 ± 13.09		
	Other	21	74.66 ± 14.37		
Internal Satisfaction Score	Clinic ^a	147	51.33 ± 7.06	7.067	<0.001
	Polyclinic ^b	90	47.46 ± 6.55		
	Refectory ^b	26	45.80 ± 8.81		
	Rotational work	16	47.50 ± 7.23		
	Other ^b	21	46.57 ± 7.39		
External Satisfaction Score	Clinic ^a	147	30.39 ± 6.17	3.533	0.008
	Polyclinic ^b	90	27.86 ± 5.82		
	Refectory	26	28.31 ± 6.17		
	Rotational work	16	26.38 ± 6.58		
	Other	21	28.10 ± 7.54		
LLCS Total Score	Clinic ^a	147	153.61 ± 29.73	3.602	0.007
	Polyclinic ^b	90	140.29 ± 24.43		
	Refectory	26	144.08 ± 23.31		
	Rotational work	16	153.19 ± 32.10		
	Other	21	152.19 ± 27.41		
Self-Management Competencies	Clinic ^a	147	39.30 ± 9.04	4.835	<0.001
	Polyclinic ^b	90	34.50 ± 7.55		
	Refectory	26	36.62 ± 6.58		
	Rotational work	16	39.69 ± 9.49		
	Other	21	38.33 ± 9.60		
Learning to Learn Competencies	Clinic ^a	147	32.54 ± 8.17	3.029	0.018
	Polyclinic ^b	90	29.52 ± 5.96		
	Refectory	26	30.96 ± 6.67		
	Rotational work	16	33.69 ± 6.95		
	Other	21	33.19 ± 7.63		
Initiative and Entrepreneurship Competencies	Clinic	147	30.14 ± 7.24	1.177	0.321
	Polyclinic	90	28.33 ± 6.97		
	Refectory	26	28.08 ± 8.61		
	Rotational work	16	30.00 ± 7.79		
	Other	21	30.33 ± 7.10		
Competency in Accessing Knowledge	Clinic	147	19.61 ± 3.71	1.782	0.132
	Polyclinic	90	18.33 ± 3.86		
	Refectory	26	18.73 ± 3.27		
	Rotational work	16	19.25 ± 4.01		
	Other	21	19.38 ± 2.89		
Digital Competencies	Clinic	147	20.45 ± 4.26	2.347	0.055
	Polyclinic	90	19.09 ± 4.34		
	Refectory	26	18.35 ± 4.73		
	Rotational work	16	18.75 ± 4.73		
Decision-Making Competencies	Clinic	147	11.57 ± 3.27	1.907	0.109
	Polyclinic	90	10.51 ± 2.94		
	Refectory	26	11.34 ± 2.62		
	Rotational work	16	11.81 ± 2.28		
	Other	21	11.71 ± 3.71		

*LLCS: Lifelong Learning Competency Scale, MSQ: Minnesota Job Satisfaction Scale. ^{**a,b}: It indicates the groups from which the significant difference originates. ANOVA Test was applied, and evaluation was made according to the Post Hoc Bonferroni Test. ^{***}Other: This refers to situations such as sports dietitians, administrative duties, and school and municipality dietitians.

Table 3. Evaluation of LLCS and MSQ Scoring by Institutions Where Dietitians Work

Variable	Group	n	$\bar{X} \pm SS$	t	p
MSQ Total Score	Public Sector	88	73.97 ± 11.30	-3.747	<0.001
	Private Sector	212	80.00 ± 13.25		
Internal Satisfaction Score	Public Sector	88	46.31 ± 6.33	-4.433	<0.001
	Private Sector	212	50.34 ± 7.50		
External Satisfaction Score	Public Sector	88	27.66 ± 5.72	-2.535	0.012
	Private Sector	212	29.67 ± 6.44		
LLSC Total Score	Public Sector	88	145.11 ± 28.27	-1.410	0.160
	Private Sector	212	150.14 ± 28.06		
Self-Management Competencies	Public Sector	88	36.83 ± 8.72	-0.961	0.370
	Private Sector	212	37.89 ± 8.71		
Learning to Learn Competencies	Public Sector	88	31.60 ± 7.05	-0.070	0.995
	Private Sector	212	31.61 ± 7.61		
Initiative and Entrepreneurship Competencies	Public Sector	88	28.39 ± 7.26	-1.585	0.114
	Private Sector	212	29.85 ± 7.31		
Competency in Accessing Knowledge	Public Sector	88	18.65 ± 3.96	-1.414	0.158
	Private Sector	212	19.31 ± 3.59		
Digital Competencies	Public Sector	88	18.70 ± 4.81	-2.476	0.014
	Private Sector	212	20.09 ± 4.24		
Decision-Making Competencies	Public Sector	88	10.94 ± 3.20	-1.116	0.265
	Private Sector	212	11.39 ± 3.11		

* LLCS: Lifelong Learning Competency Scale, MSQ: Minnessota Job Satisfaction Scale, Independent sample t-test was applied.

Table 4 shows the evaluation of LLCS and MSQ scores of dietitians according to postgraduate education, provinces they work, professional experience and working styles. As a striking result, the lifelong learning tendency score is higher in dietitians with postgraduate education. However, it was concluded that such factors were not effective in job satisfaction or lifelong learning tendency ($p > 0.05$).

The correlation between the scales and their sub-dimensions is evaluated in Table 5. A significant positive correlation was found between the internal and external satisfaction of individuals and their total job satisfaction score ($p < 0.001$). A significant and strong positive correlation was found between individuals' job satisfaction and their lifelong learning competencies total score ($p < 0.001$). In addition, a significant positive correlation was found between all sub-dimensions of lifelong learning competencies (self-management competencies, learning-to-learn competencies, initiative and entrepreneurship competencies, knowledge acquisition competencies, digital competencies, and decision-making competencies) and job satisfaction ($p < 0.001$). There is a significant and positive correlation between the total score of LLSC and all sub-dimensions of this scale ($p < 0.001$).

Table 4. Evaluation of LLCS and MSQ Scoring of Dietitians According to Their Postgraduate Education, Province of Employment, Professional Experience and Working Style

Variables		n	$\bar{X} \pm SS$	t**	p
Postgraduate Education					
MSQ Total Score	Yes	80	77.71 ± 14.08	0.418	0.676
	No	220	78.42 ± 12.58		
LLSC Total Score	Yes	80	153.45 ± 31.99	1.631	0.105
	No	220	146.92 ± 26.50		
Province of Employment					
MSQ Total Score	Metropolitan Cities	181	77.91 ± 13.05	-0.520	0.604
	Small Cities	119	78.71 ± 12.91		
LLSC Total Score	Metropolitan Cities	181	148.74 ± 27.55	0.056	0.956
	Small Cities	119	148.55 ± 29.19		
Professional Experience					
MSQ Total Score	0-1 year	120	79.20 ± 12.68	F***	p
	1-5 years	103	78.18 ± 13.77		
	5-10 years	37	75.32 ± 11.58		
	10 years and above	40	78.15 ± 13.03		
LLSC Total Score	0-1 year	120	147.71 ± 28.14	0.180	0.910
	1-5 years	103	148.74 ± 27.84		
	5-10 years	37	151.62 ± 29.11		
	10 years and above	40	148.57 ± 29.07		
Working Style					
MSQ Total Score	Full-time	194	77.70 ± 13.79	0.953	0.144
	Part-time	23	75.08 ± 11.74		
	Variable	83	80.34 ± 11.01		
LLSC Total Score	Full-time	194	149.81 ± 28.94	0.564	0.570
	Part-time	23	144.13 ± 27.11		
	Variable	83	147.24 ± 26.69		

*LLCS: Lifelong Learning Competency Scale, MSQ: Minnesota Job Satisfaction Scale, **: Independent sample t-test, ***: ANOVA Test

Table 5. Evaluation of Correlation Between Scales and Sub-Dimensions

		MSQ Total Score	LLSC Total Score	SMC	LLC	IEC	CAK	DC	DMC
MSQ Total Score	r	-	0.509	0.448	0.484	0.419	0.354	0.280	0.389
	p	-	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
ISS	r	0.935	0.481	0.425	0.451	0.396	0.342	0.273	0.354
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
ESS	r	0.925	0.466	0.407	0.450	0.382	0.316	0.248	0.370
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
LLSC Total Score	r	0.509	-	0.822	0.899	0.882	0.799	0.643	0.769
	p	<0.001*	-	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*

*MSQ: Minnesota Job Satisfaction Scale, ISS: Internal Satisfaction Score, ESS: External Satisfaction Score LLCS: Lifelong Learning Competency, SMC: Self-Management Competencies: LLC: Learning to Learn Competencies, IEC: Initiative and Entrepreneurship Competencies, CAK: Competency in Accessing Knowledge, DC: Digital Competencies, DMC: Decision-Making Competencies. **Spearman Correlation test was applied.

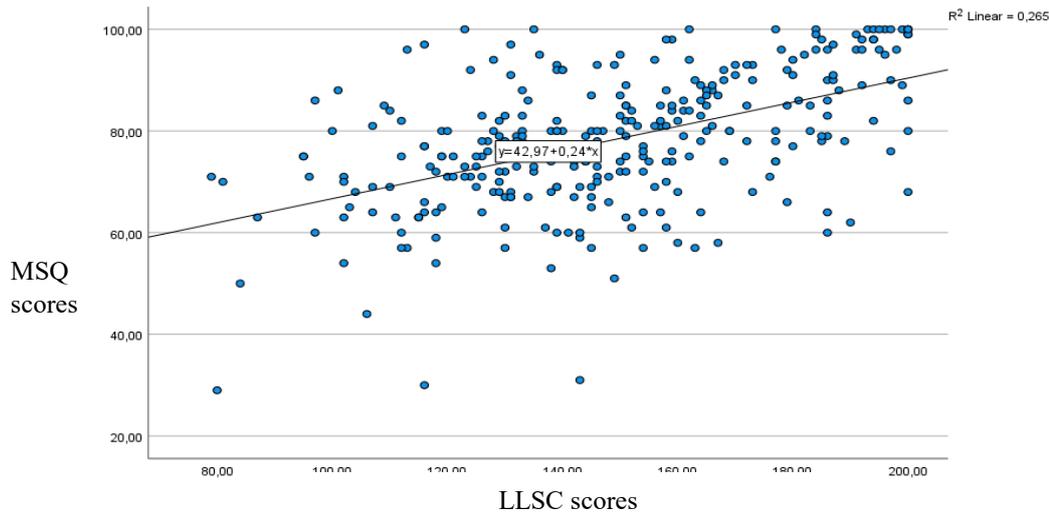
Table 6 shows the factors affecting job satisfaction. Each one-unit increase in the Lifelong Learning Competency Scale score is significantly associated with an increase in job satisfaction ($\beta=0.033$, $\text{Exp}(\beta)=1.034$, $p<0.001$). Working in the private sector significantly increases the probability of job satisfaction by 2.4 times compared to the public sector ($\beta=0.897$, $\text{Exp}(\beta)=2.453$, $p=0.010$). According to the Hosmer and Lemeshow test, it was shown that the fit was good ($\text{Hosmer}>0.388$, $p>0.05$). The Nagelkerke R^2 result shows that 28.4% of the variance of the dependent variable (job satisfaction) is explained by the variables in the model (This is a medium level of explanatory power). Factors such as age, professional experience, and work area did not have a significant effect on job satisfaction ($p>0.05$).

Table 6. Factors Affecting Job Satisfaction

	β	SE	Wald	p	Exp (β)	95% CI	
						Lower	Upper
Constant	0.504	0.119	17.872	<0.001	1.655		
LLSC	0.033	0.006	35.740	<0.001	1.034	1.022	1.045
Age	-0.016	0.044	0.133	0.715	0.984	0.902	1.073
Institution worked (Public- Private sector)*	0.897	0.348	6.636	0.010	2.453	1.239	4.855
Professional experience			5.091	0.165			
0-1 year (reference)	-0.396	0.337	1.375	0.241	0.673	0.348	1.304
1-5 years	-0.675	0.533	1.607	0.205	0.509	0.179	1.446
5-10 years	0.370	0.757	0.239	0.625	1.447	0.328	6.384
10 years and above			3.990	0.407			
Work area	-0.209	0.334	0.393	0.531	0.811	0.422	1.561
Clinic (reference)	-0.450	0.491	0.840	0.360	0.638	0.244	1.669
Polyclinic	-0.519	0.650	0.639	0.424	0.595	0.167	2.125
Refectory	-1.040	0.561	3.438	0.064	0.353	0.118	1.061
Rotational work	-0.519	0.650	0.639	0.424	0.595	0.167	2.125
Other	-1.040	0.561	3.438	0.064	0.353	0.118	1.061

*Binary logistic regression analysis, Hosmer and Lemeshow test χ^2 : 6.240 ; $p=0.620$; Nagelkerke R^2 : 0.284, **: The public sector is taken as a reference.

Figure 1 shows the linear regression between the Minnesota job satisfaction score and LLSC. There is a linear relationship between the two scale scores (R^2 : 0.265, $p<0.001$). This shows that 26.5% of the change in LLSC scores is explained by the change in job satisfaction scores.



*LLCS: Lifelong Learning Competency Scale, MSQ: Minnesota Job Satisfaction Scale

Figure 1. Linear Regression Figure Between LLCS and MSQ Total Scores

Discussion and Conclusion

This study is the first to examine the relationship between job satisfaction and lifelong learning competence in the dietetics profession. According to our results, significant relationships between job satisfaction and lifelong learning were shown according to both correlation and regression analysis results. When the factors affecting these variables were examined, it was observed that dietitians working in the private sector had higher job satisfaction than those working in the public sector. In addition, when institutions were examined, job satisfaction and lifelong learning competence were higher in clinical dietitians than in dietitians working in polyclinics. Job satisfaction is not affected by factors such as professional experience and age and other demographic variables.

People want to enter working life to satisfy themselves economically, psychologically, and sociologically. Therefore, the satisfaction an individual gets from working life is related to the extent to which the person meets his expectations (Turan et al., 2018). Lifelong learning is important for healthcare professionals to follow current developments in their fields (Basit & Bakır, 2023). It has been a fundamental part of the nutrition and dietetics profession since its early years (Gonzalez et al., 2023). In one study on job satisfaction, it was determined that nurses had a moderate level of job satisfaction (Tilev & Beydağ, 2014), while in another study, it was determined that 49.7% of them had a high level of job satisfaction (Shields & Ward 2001). Hinrichs found that registered dietitians scored significantly higher for total knowledge, while dietitian interns scored better for evidence-based practices, which is associated with lifelong learning (Hinrichs, 2018). In our study, we concluded that dietitians working in clinics

have more job satisfaction and a higher tendency for lifelong learning than dietitians working in polyclinics or refectory (Table 2). This situation indicates that the moral satisfaction that employees get from work is more evident in the clinical environment. It shows that the job satisfaction and skill levels of clinical employees are higher, and probably the work environment or professional development opportunities are better.

It is important to measure the lifelong developmental tendencies of individuals working in health institutions and their tendency to improve and educate themselves (Şirin, 2023). Like other health professionals, there are many factors affecting job satisfaction for dietitians who encounter various problems while providing individual nutrition counseling (Ongan et al., 2021). In a study conducted on healthcare professionals at a university hospital, it was observed that those with high job satisfaction were happier in their work lives and their behavior towards patients improved (Turan et al., 2018). In another study, it was found that the total job satisfaction score of managers working in private hospitals was higher than the total job satisfaction score average of managers working in public hospitals (Rençber, 2012). Another study has shown that healthcare personnel working in private hospitals have a high level of lifelong learning motivation (Şirin, 2023). A study of South African dietitians found that dietitians working in the public sector generally had a positive attitude towards their profession, but showed low levels of job satisfaction due to salary and promotion issues and lack of resources (van den Berg et al., 2024). In our study, it was observed that there was a significant difference between the fields of study of dietitians and their job satisfaction (Table 3). For this reason, we can say that the fields of study of dietitians have an effect on job satisfaction. It shows that there are differences in terms of satisfaction between the public and private sectors, but they are generally at similar levels in terms of lifelong learning competence.

Lifelong learning and job satisfaction are of great importance for employees. While the human model that the market needs requires lifelong learning, on the other hand, the effects of working conditions on people affect their job satisfaction (Torun et al., 2021). In a study conducted in Kayseri, it was found that teachers' job satisfaction and lifelong learning tendencies showed a low level and significant relationship. (Sevinç & Çelebi, 2020). An article written by a professor with medical training said that lifelong learning plays a key role in job satisfaction (Petersen, 2021). While Alonderien (2010) reported a statistically significant relationship between informal learning and job satisfaction, (Alonderiene, 2010), Kirkland (2013) stated that informal learning is a powerful force that can be used and directed (Kirkland, 2013). Our study showed a significant relationship between job satisfaction and lifelong

learning tendencies in dietitians (Table 5, Figure 1). Additionally, there is a significant relationship in all sub-dimensions of the evaluated scales (MSQ and LLSC-Table 5). Learning processes can help employees grow and develop, improve job satisfaction, and increase the organization's overall production results.

It is thought that increasing the job satisfaction of dietitians can contribute to improving the quality of life of individuals and the nutritional and health status of society (Ongan et al., 2021). It has been reported that job satisfaction increases with professional experience and participation in professional scientific meetings with dietitians, and job satisfaction decreases as the number of outpatients increases (Dağ et al., 2019). Ongan et al found that factors such as age, work sector, and income level impact job satisfaction (Ongan et al., 2021). Among teachers working in Istanbul, lifelong learning competence was found to be an important factor affecting job satisfaction. However, age, faculty of graduation and professional experience do not affect lifelong learning competence (Torun et al., 2021). In another study, teachers' lifelong learning tendencies vary significantly according to gender, desire to pursue postgraduate education, perceived income level, and graduation status (Çetinkaya, et al., 2019). It has been shown that among nurses, lifelong learning motivation does not differ statistically in terms of gender, generation, education level and clinic they work in (Basit & Bakır, 2023). In our study, it is seen that lifelong learning tendency and working in the private sector positively affect job satisfaction. Factors such as age, professional experience, field of work did not have a significant effect on job satisfaction (Table 6). When additional analyses were made, it was observed that some demographic differences (city of employment, postgraduate education, professional experience, working style) did not have an effect on job satisfaction or lifelong learning tendency (Table 4). The lack of a significant effect of these variables may indicate that job satisfaction is affected more by individual and institutional factors. In addition, although consistent with some studies and contradictory with others, it has been observed that demographic factors do not have an effect on job satisfaction and lifelong learning tendency. Studies with a larger number of participants or studies that can make comparisons across occupational groups may provide more accurate results among demographic data.

The strengths of our study are that it is the first study to examine the relationship between dietitians' lifelong learning tendencies and job satisfaction, and that it makes a significant contribution to the literature. Comparing dietitians in the private and public sectors allows us to evaluate the effects of different work environments on job satisfaction. The findings contribute to the development of concrete suggestions to increase dietitians' job

satisfaction. It is observed that those working in clinical settings experience higher job satisfaction. This situation emphasizes the importance of developing improvement strategies for dietitians in the public sector. In addition to these results, our study has some limitations. First of all, the fact that the majority of the study consisted of female dietitians affects the generalizability of the results. Our study was conducted with participants from every region of Turkey. Cultural differences or the possibilities of the work region may also affect professional satisfaction or lifelong learning. However, it was not found that the city of employment had an effect on job satisfaction or lifelong learning tendency. Another limitation is that dietitians' income levels were not questioned. The wage earned may also have an effect on job satisfaction. Different results can be reached with further studies by increasing the number of participants.

As a result, it was concluded in this study that job satisfaction and lifelong learning tendencies of dietitians are related. While both lifelong learning tendency positively affects the job satisfaction of clinical dietitians, working in the private sector is associated with more job satisfaction. This situation shows that the job satisfaction and skill levels of dietitians working in clinics are higher, and they probably have better working environments or professional development opportunities. However, these differences between different groups may require re-evaluation of in-house training or working conditions.

It would be useful to develop strategies to increase the satisfaction of dietitians working in areas such as polyclinics and cafeterias or the public sector.

According to the results of our study, suggestions for practical applications can be as follows:

- Promotion of dietitians' participation in continuing education can be implemented.
- Regular training programs can be created for dietitians outside hospitals and clinics.
- Online courses and certified trainings can be organized.
- Incentives can be created to ensure that dietitians working in public institutions have access to educational opportunities as much as those in the private sector.
- Work-life balance can be improved by providing more flexible working hours for dietitians to increase job satisfaction.
- Motivation-enhancing measures can be taken for dietitians working in polyclinics and cafeterias.
- Professional forums and communities can be created where dietitians can share their knowledge and experience.
- Thanks to mentoring programs, newly graduated dietitians can receive support from experienced colleagues.

- In order to develop digital skills, trainings on digital nutrition consultancy and online patient monitoring can be increased. Additionally, studies can be organized for the use of mobile health applications and telehealth platform.

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Conflicts of interest

The authors declare no conflicts of interest.

CRedit authorship contribution statement

H.T.B. designed the research protocol, conducted the research, prepared the manuscript, and had primary responsibility for the final content. S.C. contributed to the planning and management of the study. H.T.B. and S.C. conducted the statistical analysis and contributed to manuscript writing. All authors reviewed the manuscript

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