Investigation of The Stress-Related Nutritional Attitudes of Health Care Professıonal in A Private Hospital in Istanbul

Abstract

Aim: Nutritional behaviors are affected by many factors and stress in the work environment has an important place among these factors. The purpose of this study is to evaluate the relationship between the level of work stress and the nutritional behaviors of individuals.

Material and Method: The study was conducted with 106 healthcare professionals working in a private hospital in Istanbul. Data were collected through a personal information form applied to the participants, the Attitude Scale Towards Healthy Nutrition and the Workload-Control-Support Scale. Frequency and descriptive statistics, normality and reliability analyses, independent sample t-test, one-way analysis of variance (ANOVA) and correlation analysis were used in the analysis of the data. The significance level was accepted as $p < 0.05$.

Results: 50% of the participants were female and 50% were male; 68.9% were single and 37.7% had an associate degree. The occupational group with the highest participation was nurses with 27.4%. 85.8% of the participants did not have a chronic disease. It was determined that individuals with 10 years or more of experience in the profession showed a significant difference in terms of negative nutrition scores. In addition, in the analysis conducted according to shift type, it was determined that individuals with mixed workload received higher scores.

Conclusion: This study reveals a significant relationship between job stress and nutrition attitudes among nurses, doctors and administrative staff working in a private hospital in Istanbul. It shows that they reported lower stress levels as age increased due to their increased control over work. In the comparison made between professional groups, it was seen that doctors had higher scores on both scales. This situation suggests that doctors' academic knowledge may positively affect healthy nutrition behaviors.

Key words: Workload, Nutrition, Health, Stress, Healthcare Professionals

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INTRODUCTION

The concept of stress, which is used to express a situation in which a human or another living being is out of balance due to the conditions in which it is in danger, comes from the Latin verb "Estrictia" (Cankaya, 2020; Tuna and Baykal, 2013). In the workplace, it is seen that factors including increasing workload and speed, longer workdays, and diminished job security have a detrimental impact on employee health (Ronchetti at al., 2021). Stress occurring in the work environment is caused by both external factors and factors created by the individual himself (Muthoifin, 2024). Stress at work can cause physical and mental health issues, thus employees require help through intervention techniques (Cohen et al., 2023). Stressful work environments also bring sleep problems (Jehan at al., 2017). Most of the staff working in the hospital work on a shift system. Sleep quality impairment is observed as a result of disruption of circadian rhythm due to shift work (Güneşer and Atalay, 2020). Disturbances in the sleep-wake cycle; it is known that it causes various health problems due to changes in eating times, disruption of the hormonal balance that regulates hunger and satiety, and changes in nutrition style (James et al., 2017). It is stated that stress can lead to health problems through unhealthy choices in diet and its general effects on appetite (Bremner et al., 2020).

Nurses and doctors are professional groups with intense workload due to many negative factors arising from the working environment (James et al., 2017). At the same time, other personnel working in the hospital (translator, consultant) also work under a lot of stress because they work with both the patient and the hospital arrangements, and this affects their lifestyle. This study aims to investigate nutritional changes and nutritional status of nurses, doctors and other staff working in the hospital due to stress.

MATERIAL AND METHOD

Research Type, Location, and Duration

This cross-sectional descriptive study examines how nurses, physicians, interpreters, and consultants in a private hospital experience stress related to food consumption and its impact on their well-being. Data for this study was gathered using questionnaires from February 15 - May 30, 2024.

Research Sample

106 employees who work at a private hospital in Istanbul and aged between 18 – 65 included in this study. The inclusion criteria for the study are as follows: participants must be employees of a private hospital, aged between 18 and 65 years old, and at least a high school graduate. On the other hand, the exclusion criteria include individuals who are not employees of a private hospital, those who are younger than 18 or older than 65 years, and those who wish to withdraw from the study. When the universe size was assumed to be 400 people and calculated with a 90% confidence level and 5% sampling error, a sample of 106 people was found to be sufficient.

Data Collection Tools

The data collection tool which is based on the questionnaire consists of three parts.

Demographic Data

In the first part of the questionnaire form, there are questions about the personal information of the health personnel (age, gender, height, weight, presence of chronic disease, use of supplements, marital status, use of medication, occupation, working unit, working time in the profession),

Nutrition Attitude

The Attitude Towards Healthy Eating Scale (AHSES) is a scale developed by Tekkurşun Demir and Cicioğlu and includes four sub-dimensions consisting of 21 items (Demir & Cicioğlu, 2019). These dimensions are named as 'Knowledge about Nutrition', 'Emotion towards Nutrition', 'Positive Nutrition' and 'Negative Nutrition'. The scale is scored as 'Strongly Disagree', 'Disagree', 'Undecided', 'Agree', 'Strongly Agree' for positive items. The range of points that can be obtained from the scale is 21-105.

Work-Related Stress Status

The Workload-Control-Support Questionnaire was adapted by Demiral et al. (2007) from the Swedish Workload-Work Control Social Support Questionnaire (Work Stress Scale) into Turkish. This scale consists of 17 questions and has three dimensions. There are 5 items for workload, 6 items for job control and 6 items for social support (Demiral et al, 2007).

Statistical Analysis

Statistical evaluations were analyzed with IBM SPSS (Statistical Package for Social Sciences) 23 program. In this study, frequency analysis, descriptive statistics, normality analysis, reliability analysis, independent

sample t-test, ANOVA, one-way analysis of variance and correlation tests were used. Statistical significance level was accepted as $p < 0.05$.

Ethical Statement

Prior to application, Istanbul Yeni Yüzyıl University's Ethics Committee for Non-Interventional Health Sciences Research approved this study (Approval Number: 2024/01-1182 on January 8, 2024).

RESULTS

A total of 106 people, 53 women (50.0%) and 53 men (50.0%), participated in the study. The average age of all the participants was 33,05±11,00. When the marital status of the participants was examined, it was found that majority of the participants (68.9%) were single. Overall the participants, 25 participants were doctors (23.6%), 25 participants were consultants (23.6%), 29 participants were nurses (27.4%) and 27 participants were translators (25.5%). Normal distribution analysis was performed using the Shapiro-Wilk test and p-value was found to be = 0.085, indicating that the data were normally distributed. The reliability of the scale used in the study was evaluated with Cronbach's Alpha and was found to be $\alpha = 0.89$.

It was found that there were 15 people (14.2%) with chronic diseases and 91 people without chronic diseases (85.8%). When the working time of the participants in the profession was examined, it was found that there were 27 people (25.5%) working for 0-3 years, 23 people (21.7%) working for 3-5 years, 24 people working for 5-10 years (22.6%) and 32 people working for 10 years or more (30.2%). Majority of the participants (67 people- 63.2%) working during the day, whereas 9 people working at night (8.5%) and 30 people working mixed (28.3%). When the variable of whether you use medication regularly was examined, it was found that there were 11 people (10.4%) who used it and 95 people (89.6%) who did not use it. Additionally majority of the participants did not use vitamin supplements (81 people - 76,4%) (Table 1).

There is a statistically higher significant the total

Table 1 Descriptive Statistics (n=106)

		Number of people (n)	Percentage (%)
Age	20-26 years old	36	34,0
	27-35 years old	39	36,8
	36 years and above	31	29,2
	$\bar{x}$± Sd	33,05±11,00	
Weight	$\bar{x}$± Sd	70,92±12,96	
BMI	$\bar{x}$± Sd	23,9525±2,65	
Gender	Female	53	50,0
	Male	53	50,0
Marital Status	Single	73	68,9
	Married	33	31,1
Educational Background	High School	6	5,7
	College	40	37,7
	Bachelor Degree	35	33,0
	Postgraduate	25	23,6
Occupation	Doctor	25	23,6
	Advisor	25	23,6
	Nurse	29	27,4
	Translator	27	25,5
Chronic Medical Condition	Yes	15	14,2
	No	91	85,8
Working Time in the Profession	0-3 years	27	25,5
	3-5 years	23	21,7
	5-10 years	24	22,6
	10 years and above	32	30,2
Shifts You Frequently Work	Daytime	67	63,2
	Night	9	8,5
	Mixed	30	28,3
Do you use any medications regularly?	Yes	11	10,4
	No	95	89,6
Do you use vitamins for supplements?	Yes	25	23,6
	No	81	76,4

score averages of the Positive Nutrition subscale of the Attitudes Towards Healthy Nutrition Scale for female participants ($p<0.05$), whereas other subscales did not differ between genders. And also Work Load Control Scale subscales did not significantly differ between genders (Table 2).

Statistically, it was found that there were significant differences in the total mean scores of various subscales of Attitudes Towards Healthy Nutrition Scale and Workload Control Support Scale among age categories ($p<0.05$). Specifically, individuals aged 36 years and above scored higher on the Knowledge About Nutrition, Feelings Towards Nutrition, Negative Nutrition, Skills, Work Control and Social Support subscales compared to those in the 20-26 and 27-35 age groups. Tukey-B (Post Hoc) multiple comparison tests confirmed that individuals in the 36 years and above age group consistently scored higher on these subscales, as detailed in Table 3.

A statistically significant difference was observed across all sub-dimensions of the Attitudes Towards Healthy Nutrition and Workload-Control Support Scales. The mean scores for all sub-dimensions of the Attitudes Towards Healthy Nutrition Scale were found to be higher among individuals with work as a doctor. Additionally, doctors demonstrated higher mean scores in all sub-dimensions of the Workload-Control Support Scale, with the exception of the workload sub-dimension. Conversely, nurses had higher mean scores specifically in the workload sub-dimension, as shown in Table 4.

There is a weak, statistically significant, positive relationship between the total score averages of the Knowledge About Nutrition subscale of the Attitudes Towards Healthy Nutrition Scale and the total scores of the Skills subscale of the Workload-Control Support Scale ($r= 0.322$; $p<0.05$). There is a statistically significant positive moderate relationship between the total score averages of the Knowledge About Nutrition subscale of the Attitudes Towards Healthy Nutrition Scale and the Total Freedom of Decision subscale scores of the Workload-Control Support Scale (r =

Table 2 Examination of the Difference Between Attitudes Towards Healthy Nutrition and Sub-Dimension Total Score Means of the Workload-Control Support Scale for Gender Variable

	Scale/Subsize	Gender	N	$\bar{x}\pm$ ss	t	P
Attitude Scale Towards Healthy Nutrition	Information About Nutrition	Female	53	20,75±2,814	0,723	0,471
		Male	53	20,34±3,088		
		Total	106	20,55±2,948		
	Emotion Towards Nutrition	Female	53	15,26±4,828	1,609	0,111
		Male	53	13,79±4,584		
		Total	106	14,53±4,743		
	Positive Nutrition	Female	53	19,13±3,858	2,367	**0,020***
		Male	53	17,49±3,256		
		Total	106	18,31±3,647		
	Negative Nutrition	Female	53	16,43±4,758	1,084	0,281
		Male	53	15,53±3,791		
		Total	106	15,98±4,305		
Workload-Control Support	Workload	Female	53	14,38±2,482	-0,170	0,865
		Male	53	14,45±2,071		
		Total	106	14,42±2,276		
	Skill	Female	53	12,19±2,085	0,849	0,398
		Male	53	11,85±2,032		
		Total	106	12,02±2,056		
	Freedom of Decision	Female	53	5,72±1,610	-0,491	0,625
		Male	53	5,87±1,557		
		Total	106	5,79±1,578		
	Job Control	Female	53	17,91±2,691	0,354	0,724
		Male	53	17,72±2,790		
		Total	106	17,81±2,729		
	Social Support	Female	53	19,04±2,835	-0,929	0,355
		Male	53	19,53±2,599		
		Total	106	19,28±2,718		

*p<0,05

Table 3 Examination of the Difference Between the Sub-Dimension Total Score Means of the Attitudes Towards Healthy Nutrition and Workload-Control Support Scale for Age Groups Variable

	Scale/Subsize	Age Groups	n	$\bar{x}$± ss	F	P
Attitude Scale Towards Healthy Nutrition	Information About Nutrition	20-26 years old	36	20,19±2,584[a]	3,648	**0,029***
		27-35 years old	39	19,95±2,533[a]		
		36 years and above	31	21,71±3,533[b]		
	Emotion Towards Nutrition	20-26 years old	36	13,28±4,773[a]	4,922	**0,009***
		27-35 years old	39	14,00±4,186[a]		
		36 years and above	31	16,65±4,807[b]		
	Positive Nutrition	20-26 years old	36	17,92±4,129[a]	1,112	0,333
		27-35 years old	39	18,03±3,133[a]		
		36 years and above	31	19,13±3,640[a]		
	Negative Nutrition	20-26 years old	36	14,44±4,772[a]	10,038	**0,000***
		27-35 years old	39	15,31±2,745[a]		
		36 years and above	31	18,61±4,264[b]		
Workload-Control Support	Workload	20-26 years old	36	14,06±2,651[a]	2,884	0,060
		27-35 years old	39	14,10±1,997[a]		
		36 years and above	31	15,23±1,978[a]		
	Skill	20-26 years old	36	11,44±2,197[a]	11,016	**0,000***
		27-35 years old	39	11,49±1,790[a]		
		36 years and above	31	13,35±1,582[b]		
	Freedom of Decision	20-26 years old	36	5,44±1,715[a]	1,612	0,202
		27-35 years old	39	5,85±1,387[a]		
		36 years and above	31	6,13±1,607[a]		
	Job Control	20-26 years old	36	16,89±2,713[a]	9,913	**0,000***
		27-35 years old	39	17,33±2,216[a]		
		36 years and above	31	19,48±2,657[b]		
	Social Support	20-26 years old	36	18,58±3,263[a]	9,396	**0,000***
		27-35 years old	39	18,62±1,955[a]		
		36 years and above	31	20,94±2,144[b]		

*p<0,05. Different letters show the signicificance between age groups (ANOVA, Tukey).

0.471; p < 0.05). There is a statistically significant positive moderate relationship between the total score averages of the Knowledge About Nutrition subscale of the Attitudes Towards Healthy Nutrition Scale and the Job Control subscale total scores of the Workload-Control Support Scale (r= 0.515; p < 0.05). There is a weak, statistically significant, positive relationship between the total score averages of the Knowledge About Nutrition sub-dimension of the Attitudes Towards Healthy Nutrition Scale and the Social Support sub-dimension total scores of the Workload-Control Support Scale (r = 0.196; p < 0.05) (Table 5).

There is a statistically significant positive moderate relationship between the Positive Nutrition subscale total score averages of the Attitudes Towards Healthy Nutrition Scale and the Decision Freedom

Table 4 Investigation of the Difference Between Attitudes Towards Healthy Nutrition and Workload-Control Support Scale Subscale Total Score Averages for Occupational Variables

	Scale/Subsize	Occupation	n	$\bar{x}$± ss	F	P
Attitude Scale Towards Healthy Nutrition	Information About Nutrition	Doctor	25	22,44±2,417[a]	7,391	**0,000***
		Advisor	25	19,48±2,434[b]		
		Nurse	29	20,97±3,365 [ab]		
		Translator	27	19,33±2,402b		
	Emotion Towards Nutrition	Doctor	25	17,36±4,377[a]	4,868	**0,003***
		Advisor	25	13,88±5,457[b]		
		Nurse	29	12,83±4,676[b]		
		Translator	27	14,33±3,282[b]		
	Positive Nutrition	Doctor	25	20,00±2,930[a]	3,573	**0,017***
		Advisor	25	17,28±3,725[b]		
		Nurse	29	17,31±3,983[b]		
		Translator	27	18,78±3,286[ab]		
	Negative Nutrition	Doctor	25	19,04±4,277[a]	8,184	**0,000***
		Advisor	25	14,12±4,484[b]		
		Nurse	29	14,62±4,004[b]		
		Translator	27	16,33±2,760[b]		
Workload-Control Support	Workload	Doctor	25	15,40±2,000[a]	16,223	**0,000***
		Advisor	25	12,68±1,725[b]		
		Nurse	29	15,83±1,834[a]		
		Translator	27	13,59±2,024[b]		
	Skill	Doctor	25	13,72±1,061[a]	32,448	**0,000***
		Advisor	25	10,56±1,758[b]		
		Nurse	29	13,14±1,432[a]		
		Translator	27	10,59±1,623[b]		
	Freedom of Decision	Doctor	25	6,56±1,325[a]	2,801	**0,044***
		Advisor	25	5,56±1,474[ab]		
		Nurse	29	5,66±1,542[ab]		
		Translator	27	5,44±1,761[b]		
	Job Control	Doctor	25	20,28±1,671[a]	25,712	**0,000***
		Advisor	25	16,12±2,279[c]		
		Nurse	29	18,79±2,381[b]		
		Translator	27	16,04±1,911[c]		
	Social Support	Doctor	25	21,28±2,072[a]	7,025	**0,000***
		Advisor	25	18,64±2,548[b]		
		Nurse	29	18,48±2,886[b]		
		Translator	27	18,89±2,407[b]		

*p<0,05. Different letters show the signicificance between age groups (ANOVA, Tukey).

subscale total scores of the Workload-Control Support Scale (r= 0.437; p<0.05). There is a weak, statistically significant positive relationship between the Positive Nutrition subscale total score averages of the Attitudes Towards Healthy Nutrition Scale and the Workload-Control Support Scale's Work Control subscale total scores (r= 0.346; p<0.05). There is a weak, statistically significant positive relationship between the Positive Nutrition subscale total score averages of the Attitudes Towards Healthy Nutrition Scale and the Social Support subscale total scores of the Workload-Control Support Scale (r= 0.312; p<0.05) (Table 5).

There is a statistically significant difference between the Workload subscale total score averages of the Workload-Control Support Scale according to the shift

Table 5 Correlation Table Between Attitudes Towards Healthy Nutrition and Sub-Dimension Total Score Means of the Workload-Control Support Scale

Scale/Subsize	Information About Nutrition	Emotion Towards Nutrition	Positive Nutrition	Negative Nutrition
Workload	0,060	-0,157	-0,026	-0,044
Skill	**0,322***	0,016	0,124	0,139
Freedom of Decision	**0,471***	0,125	**0,437***	-0,110
Job Control	**0,515***	0,084	**0,346***	0,041
Social Support	**0,196***	0,104	**0,312***	0,098

*p<0,05

Table 6 Examination of the Difference Between Attitudes Towards Healthy Eating and Workload-Control Support Scale Subscale Total Score Means for Frequent Shift Variables

	Scale/Subsize	**Shifts You Frequently Work**	**n**	**x̄± ss**	**F**	**P**
Attitude Scale Towards Healthy Nutrition	Information About Nutrition	Daytime	67	20,76±2,818[a]	0,497	0,610
		Night	9	20,00±3,391[a]		
		Mixed	30	20,23±3,148[a]		
	Emotion Towards Nutrition	Daytime	67	15,21±4,409[a]	2,656	0,075
		Night	9	15,00±5,723[a]		
		Mixed	30	12,87±4,918[a]		
	Positive Nutrition	Daytime	67	18,82±3,529[a]	1,805	0,170
		Night	9	17,44±2,555[a]		
		Mixed	30	17,43±4,049[a]		
	Negative Nutrition	Daytime	67	16,72±4,316[a]	2,986	0,055
		Night	9	15,56±3,321[a]		
		Mixed	30	14,47±4,240[a]		
Workload-Control Support	Workload	Daytime	67	13,82±2,289[a]	7,530	**0,001***
		Night	9	14,78±1,716[ab]		
		Mixed	30	15,63±1,903[b]		
	Skill	Daytime	67	11,75±2,184[a]	1,721	0,184
		Night	9	12,22±1,986[a]		
		Mixed	30	12,57±1,695[a]		
	Freedom of Decision	Daytime	67	5,91±1,676[a]	0,554	0,576
		Night	9	5,44±1,130[a]		
		Mixed	30	5,63±1,474[a]		
	Job Control	Daytime	67	17,66±2,952[a]	0,420	0,658
		Night	9	17,67±2,828[a]		
		Mixed	30	18,20±2,172[a]		
	Social Support	Daytime	67	19,61±2,640[a]	2,979	0,055
		Night	9	20,11±2,667[a]		
		Mixed	30	18,30±2,731[a]		

*p<0,05. Different letters show the signicificance between age groups (ANOVA, Tukey).

Table 6 Examination of the Difference Between Attitudes Towards Healthy Eating and Workload-Control Support Scale Subscale Total Score Means for Frequent Shift Variables

	Scale/Subsize	Working Time in the Profession	n	$\bar{x}\pm$ ss	F	P
Attitude Scale Towards Healthy Nutrition	Information About Nutrition	0-3 years	27	20,00±2,557 [a]	4,913	**0,003***
		3-5 years	23	19,48±2,937 [a]		
		5-10 years	24	20,13±3,111 [a]		
		10 years and above	32	22,09±2,632 [b]		
	Emotion Towards Nutrition	0-3 years	27	14,96±5,396 [ab]	4,907	**0,003***
		3-5 years	23	13,13±4,299 [a]		
		5-10 years	24	12,50±3,477 [a]		
		10 years and above	32	16,69±4,482 [b]		
	Positive Nutrition	0-3 years	27	17,63±4,369 [a]	1,068	0,366
		3-5 years	23	17,74±4,444 [a]		
		5-10 years	24	18,54±2,484 [a]		
		10 years and above	32	19,13±3,013 [a]		
	Negative Nutrition	0-3 years	27	14,96±4,372 [a]	6,423	**0,000***
		3-5 years	23	14,04±4,106 [a]		
		5-10 years	24	15,71±3,884 [a]		
		10 years and above	32	18,44±3,689 [b]		
Workload-Control Support	Workload	0-3 years	27	13,22±2,679 [a]	3,972	**0,010***
		3-5 years	23	14,52±2,108 [ab]		
		5-10 years	24	14,71±1,681 [ab]		
		10 years and above	32	15,13±2,106 [b]		
	Skill	0-3 years	27	10,56±2,242 [a]	13,82	**0,000***
		3-5 years	23	11,43±1,854 [ab]		
		5-10 years	24	12,42±1,472 [bc]		
		10 years and above	32	13,38±1,385 [c]		
	Freedom of Decision	0-3 years	27	5,74±1,509 [a]	0,663	0,576
		3-5 years	23	5,43±1,562 [a]		
		5-10 years	24	5,88±1,676 [a]		
		10 years and above	32	6,03±1,596 [a]		
	Job Control	0-3 years	27	16,30±2,539 [a]	9,392	0,000*
		3-5 years	23	16,87±2,492 [ab]		
		5-10 years	24	18,29±2,528 [bc]		
		10 years and above	32	19,41±2,284 [c]		
	Social Support	0-3 years	27	18,96±2,993 [a]	6,672	0,000*
		3-5 years	23	18,43±2,085 [a]		
		5-10 years	24	18,29±2,726 [a]		
		10 years and above	32	20,91±2,190 [b]		

*p<0,05. Different letters show the signicificance between age groups (ANOVA, Tukey).

categories you frequently work (p<0.05). According to the results of the Tukey-B (Post Hoc) multiple comparison made to find out which category the difference originates from, the mean total score of the Workload sub-dimension of the Workload-Control Support Scale of mixed workers is higher than the Workload sub-dimension total score averages of the Workload-Control Support Scale of people working during the day and night. Accordingly, mixed working people obtained higher scores than the total score average of the Workload sub-dimension of the Workload-Control Support Scale (Table 6).

A statistically significant difference was found in the total score averages of multiple subscales of the Attitudes Towards Healthy Nutrition and Workload-Control Support Scales based on years of professional experience (p<0.05). Specifically, individuals with 10 or more years of experience scored higher than those with 0-3 years, 3-5 years, and 5-10 years of experience across several subscales. In the Attitudes Towards Healthy Nutrition Scale, the subscales of Knowledge About Nutrition, Emotions Towards Nutri-

tion, and Negative Nutrition all showed higher average scores for individuals with 10 or more years of work experience compared to those with less experience. Similarly, in the Workload-Control Support Scale, individuals with 10 or more years of experience had higher scores in the Workload, Skill, Job Control, and Social Support subscales compared to their less experienced counterparts. These findings are detailed in Table 7.

DISCUSSION

This study was conducted to examine the relationship between work stress and nutritional behavior of hospital employees and their nutritional status.

Hospitals, which provide service 24 hours a day, 7 days a week, are a sector dominated by workers working in shifts or on duty. They are a group of healthcare professionals who work outside normal working hours and days, compete with time, and are under intense stress and pressure. Doctors and nurses, among hospital employees who have a versatile workload in maintaining health services, are the professional groups that spend the most time with patients (Maharaj et al., 2019). The working environment and conditions affect the stress factor of employees, and as a result, some nutritional problems arise (Tekin Epik and Öztürk, 2020). Healthy eating is defined as sufficient and balanced intake of macro and micronutrients such as carbohydrates, protein, fat, vitamins, minerals, fiber and water in order to protect physical and mental health. It is crucial for a healthy diet to limit the intake of salt, sugar, and fat; avoid processed and packaged foods; drink plenty of water; and engage in physical activity (Schultchen et al., 2019). Poorer food quality and more emotional eating are linked to higher levels of job stress among hospital staff (Ozenoglu ve Erkul, 2024).

Work stress was analyzed by gender and no statistical difference was found. In a study conducted among 243 physicians and non-nurse healthcare personnel, no significant difference was found when job stress scores and gender were evaluated. In Sasaki et al.'s (2019) study conducted with 949 nurses in Vietnam for the job stress scale, no significant difference was detected in terms of gender. Consistent to this study, Sob et al.'s study (2023) found that the positive eating sub-dimension score was higher in women than in men. However, no significant difference was found in Quisumbing et al.'s study (Quisumbing, 2021). In our study, it was found that women had higher positive nutrition subscale scores. Based on this result, it can be seen that women know better the benefits of healthy nutrition. When looking at the literature, it was seen that different results were obtained in terms of the gender variable. This may indicate that work stress causes a similar effect on gender (Davis, 2020; Heub et al., 2024).

The participants' ages revealed that 36 individuals (34.0%) were between the ages of 20-26, 39 individuals (36.8%) were between 27-35, and 31 individuals (29.2%) were aged 36 and above. Job stress perception was analyzed by age groups, revealing a significant difference in the job control sub-dimension, with the result of individuals aged 36 and over scoring higher. As the job control score increased, stress levels decreased. Thus, we found that individuals aged 36 and under experienced higher levels of stress. As individuals grow older, their experience expands providing enhancing their ability to cope with work-related stress, which results in lower stress levels (Işıkhan, 2004). Responses from participants aged 36 and above showed they had the authority to determine how and what to do in their roles, suggesting that greater experience leads to easier job control. A study by Alnazly et al. (2021) found that individuals over 40 experienced more anxiety and stress than those under 40, but this study's findings differ from our study maybe because of the differences in the sample groups. It was found that there were 15 people (14.2%) with chronic diseases and 91 people (85.8%) without chronic diseases. Similar to our results, the prevalence of self-reported noncommunicable diseases in grassroot-level healthcare workers was 10.2%, with hypertension and diabetes being the most common (Mistry and Bhanderi, 2023). In our study, individuals with chronic diseases have high scores on the knowledge subscale about nutrition. This shows that people with chronic diseases know what healthy foods are. Additionally, the answers given show that people with chronic diseases know which foods contain carbohydrates, proteins, vitamins and minerals.

Studies have shown that there is a significant relationship between years of work and nutritional status (Aulyanti et al., 2023; Daswin et al., 2021) In our study, it was found that participants with 10 or more years of experience in the profession have a higher negative nutrition score. According to the answers given by individuals who have been working for 10 or more years, it has been determined that they tend to skip meals, eat quickly, and consume more junk food. In a study, it was determined that healthcare professionals who

have been working for many years have poor sleep quality and therefore poor nutrition which was parallel to our study (Chung et al., 2009). When the work shift is examined, the workload subdimension score is higher in people who work mixed jobs. The responses revealed that individuals with mixed working hours tend to work more intensively and quickly, requiring more effort. Parallel to our study, a study indicated that shift workers experience more work stress than day workers (D'Ettorre et al., 2020). Another study also revealed that the shift system affects work stress (Choi and Kim, 2022). This study was found to be consistent with the literature in terms of working hours and job stress.

Creating designated rest areas for shift workers or implementing psychosocial support units is important in terms of employees' stress levels and eating habits. A significant difference was found in the Workload subscale according to work shifts. Mixed shift workers reported significantly higher workload compared to those working only during the day or night ($p<0.05$). Workload and shift work have a substantial influence on employees' performance and well-being, according to research. A high workload is linked to personal and family issues, poor sleep quality, decreased physical and mental health, and increased workplace stress Saedpanah et al., 2022). For physicians, heavy workload and consecutive shifts may lead to incorrect practices in treatment (Leviatan et al., 2021). Stress resulting from shift work at work also causes nutritional disorders. Dietician or nutritionist-supported consultancy services should be provided periodically in workplaces. Personal nutrition plans should be created by taking into account the individual risk factors of employees.

CONCLUSION and RECOMMENDATIONS

This study emphasizes the significant relationship between stress and nutritional attitudes among nurses, doctors, and administrative staff working in a private hospital in Istanbul. The findings show that individuals with more years of experience, particularly those aged 36 and over, tend to report lower stress levels, possibly due to their increased ability to manage job demands and greater job control. When examined according to occupational distribution, the average scores of doctors were found to be much higher in both scales. The high nutritional attitude scores of doctors along with their academic knowledge indicate a positive effect on healthy nutritional behaviors.

In order to deal with stress at hospitals, meetings can be organized with psychologists to improve the mental health of employees. From the nutrition perspective, a dietician can be assigned and conferences can be organized explaining the importance of adequate and balanced nutrition. A night menu that is easy to digest, high in fiber and low in simple carbohydrates can be created for shift workers. Additionally a sufficient number of personnel should be hired and workload should be reduced.

Individualized nutrition education programs should be organized for shift workers to gain healthy eating habits. In the trainings, attention should be drawn to the changes in metabolic rate and energy balance of individuals working at night. When making shift arrangements, employees' meal times and rest intervals should be organized in a planned manner. Especially those working on night shifts should be encouraged to consume healthy snacks at appropriate times. Institutions should provide meal services that offer employees healthy eating options. Instead of fast-food based menus in cafeterias open during night shifts, alternatives that include balanced macro and micronutrients should be offered. Healthy snacks such as fruit, yoghurt and nuts should be available in workplaces and easy access should be provided to them. Regular information seminars should be held to raise awareness among employees about the relationship between nutrition, work efficiency and general health. These trainings will increase employee motivation and make it easier for them to adopt healthy lifestyle behaviors.

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