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Research Article

Examination of Women's Emotional Eating Behaviors, Stress Levels and Nutritional Status According to Working Status

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Abstract

Today, health is considered as a concept related to all dimensions of human life, such as physical, social, emotional and spiritual state. In this sense, health includes satisfaction with life and quality of life and is an expression of self-realization [1]. The healthy and economic development of the society depends on the health of the individuals who make it up. In this direction, the aim is; to protect, improve and develop the health of all individuals throughout life, to increase the quality of life and to adopt a healthy lifestyle.

Keywords: Eating Behaviors; Stress Levels; Nutritional Status

Introduction

The insufficient level of nutrition knowledge and awareness of the society prevents the effective use of resources despite the sustainable nutritional security of individuals and affects the health status of individuals. In addition, it may cause the country to be adversely affected economically and socially in the long term [2]. For this reason, individuals should have adequate and balanced nutrition starting from the family environment and gain healthy eating habits for the future. The most effective and traditional roles of women in the family; education, health and nutrition of family members. When evaluated traditionally, the food selection, nutritional knowledge and behaviors of the woman, who is primarily responsible for the adequate and balanced nutrition of her individuals, affect the family members. It has a key role in the implementation of the healthy nutrition policy both in the woman's own family and in the society as a whole. The woman's health is extremely important because it reflects the health of the family [3]. Striking an effective balance between family and work can lead to stress among women. When the factors that cause stress among working women are examined; stress in working conditions and its perception are grouped as low financial benefit, stress caused by safety and security. The conflict between work and family life arising from this situation is defined as a situation in which it interferes with the fulfillment of work demands and family responsibilities [4].

Feeding and eating behaviors can change during stressful periods. Some people are able to cope with stress by eating more as a result of stress, i.e., eating as a result of negative emotional states such as sadness, loneliness, and anxiety. Long-term stress can affect the levels of stress hormones and result in chronic diseases such as abdominal obesity and metabolic syndrome. It is stated that the spread of obesity and abnormal eating behavior may be related to changes in business life [5]. This suggests that stress can affect eating behavior in a variety of ways under different conditions. Emotional eating has been found to be more common among women under stress. In one study, emotional eating was triggered by unpleasant emotions such as boredom or anxiety in men, while women identified stress as the primary trigger for emotional eating [6]. It has been stated that K adins are more prone to emotional eating behaviors [7].

Work stress and burnout may encourage less healthy eating behaviors [8] and are often associated with excessive nutrient intake [9]. In addition, the effect of emotional eating may be higher among high-stress occupational groups and may be a source of greater concern among working women. Negative stress experiences, poor appetite management, increased food intake, emotional eating, binge eating, and sedentary behaviors may contribute to an increase in body weight and thus obesity [10]. The causes of obesity are multifaceted, and two of them are psychological and behavioral

factors. Eating behaviors have also been suggested to be a strong predictor of an increase in body weight in women [11].

The aim of this study was to investigate the effect of emotional eating behavior and stress on nutritional status in working and non-working women between the ages of 18-65.

Materials and Methods

This research was conducted on a total of 296 working and non-working women between the ages of 18-65 who applied to the Yatağan District Health Directorate Nutrition and Diet consultancy in Yatağan district of Muğla province between 10 January and 10 July 2020 and voluntarily participated in the research. For the study, the 'Ethics Committee Approval' dated 25/11/2019 with the decision number 20/03 was obtained from the Clinical Research Ethics Committee of Trakya University Faculty of Medicine. Participation in the study was completely voluntary and the questionnaire was applied face-to-face after obtaining verbal and written approval. From the volunteer individuals who participated in the study; socio-demographic and health information, Emotional Appetite Questionnaire, Three-Factor Nutrition Questionnaire, Perceived Stress Scale, Food Consumption Record and data were collected. Daily energy, macro and micronutrient amounts were calculated through the BeBiS program from the food consumption record taken with the retrospective reminder of the last 24hours.

Emotional appetite questionnaire

In the study, Emotional Appetite Questionnaire (DIA) was applied to evaluate the effect of mood on nutritional status of individuals. The Emotional Appetite questionnaire was created by Nolan., *et al*. On the scale, the level of influence of emotions on appetite is scored as less (1-4), same (5) and more (6-9). The presence of emotional eating is assessed in negative/positive emotions (14 items) and negative/positive situations (8 items). The DIA Negative total score is obtained by collecting the scores of negative emotions and negative situations and the DIA Positive total score is obtained by collecting the scores of positive emotions and positive situations. Turkish validity and reliability of the scale were tested by Demirel., *et al.* [12].

Three-Factor Nutrition Questionnaire

In the study, the Three Factor Nutrition Questionnaire (TFEQ-R18) was used to evaluate the eating behaviors of individuals. Survey; uncontrolled eating behaviors, cognitive restriction behaviors and emotional eating behaviors consist of sub-dimensions and measure the degrees of the sub-dimensions. The questionnaire was originally created as 51 questions and took its final form of 18 questions after the validity and reliability test of the questionnaire was conducted in various populations. In the evaluation of the survey; the answers to each question are scored from 1 to 4. In this context, the total score varies between 18 and 72 points. The total score and the score of the sub-dimensions are used to evaluate the behavior(s). The validity and reliability of the TFEQ-R18 questionnaire in Turkey were tested by Kıraç., *et al*. [13].

Perceived stress scale

In the study, the Perceived Stress Scale was used to measure the stress levels of the participants (Appendix 1). The Perceived Stress Scale (ASS), which consists of a total of 14 items, is designed to measure the extent to which the individual is perceived as stressed in the situations they experience [14]. The items included are evaluated on a 5-point Likert type scale ranging from "Never (0)" to "Very often (4)". In the Perceived Stress Scale-14 (ASÖ-14), the scores vary between 0-56 points. The high score obtained shows the high state of the individual's perception of stress.

Food consumption record

In order to evaluate the nutritional status of the individuals in the study, a 24-hour food consumption record was taken by the researcher with the retrospective reminder method. The amounts of food/nutrients eaten were recorded in detail along with their contents. Food/food portions and quantities were calculated using 'Food and Food Photo Catalog: Measurements and Quantities' [15] and binspired consumption records were evaluated with the BEBİS program.

Statistical evaluation of data

Normality control of continuous variables was performed Shapiro Wilk test. Student's t test was used to compare two independent group averages for variables that fit the normal distribution, and Mann Whitney U test was used for those who did not. Descriptive statistics were expressed as mean, standard deviation, median, 25%, 75% quarters, minimum and maximum values. When examining the linear relationship between two continuous variables, Spearman correlation coefficients were calculated because they did not satisfy the normality condition. In the analysis of categorical data, Chi-Square test was used. The significance group was determined by comparing the two ratios for the variables that had more than two categories and were found to be significant. The statistical significance level was taken as 0.05. The data were analyzed in SPSS 21 package program.

Results

148 of the women between the ages of 18-65 who participated in the study were grouped as working women (50%) and 148 as non-working women (50%). It was found that the rate of primary and secondary school graduates was higher in women who did not work according to their education status, and the rate of working women was higher than the rate of high school and university graduates ($p < 0.05$). While the rate of being retired, housewife and student was higher in non-working women, the rate of civil

Socio-demographic and S network Information	Working women (s = 148)		Non-working women (s = 148)		p
	s	%	s	%	
Education Status					
Literate	-	-	5	3,40*	<0,001*
Primary school	6	4,10	34	23,00*	
Secondary school	12	8,10	32	21,60*	
Lise	69	46,60*	51	34,50	
University	57	38,50*	26	17,60	
Master	4	2,70*	-	-	
Profession					
Retired	-	-	19	12,80*	<0,001*
Housewife	-	-	106	71,60*	
Civil servant	77	52,00*	-	-	
Self-employment	42	28,40*	-	-	
Worker	29	19,60*	-	-	
Student	-	-	19	12,80*	
Diagnosed disease status					
Where	32	21,60	46	31,10	0,065
No	116	78,40	102	68,90	
Smoking					
Where	25	16,90*	12	8,10	0,025*
No	119	80,40	135	91,20*	
Left	4	2,70	1	0,70	
Alcohol use					
Where	12	8,10	11	7,40	0,828
No	136	91,90	137	92,60	
Use of vitamin supplements					
Where	23	15,50	28	18,90	0,442
No	125	84,50	120	81,10	
Physical activation					
Where	36	24,30	23	15,50	0,059
No	112	75,70	125	84,50	

Table 1: Some socio-demographic and health information distributions of studied and non-working women.

Chi-Square test, $p < 0.05$, *refers to the higher rate

servants, self-employed and workers was higher in working women ($p < 0.05$). In addition, it was found that working women had a higher smoking rate than non-working women ($p < 0.05$) (Table 1).

Working women had lower scores of uncontrolled eating, emotional eating and higher positive scores of DIA than non-working participants ($p < 0.05$). According to the study status, there was no difference between ASS, cognitive restriction, sensitivity to hunger and DIA negative scores ($p > 0.05$) (Table 2).

The distribution of the relationship between the working status of the participants and the energy they receive with the daily diet and the average values of macro-micronutrients is shown in table 3. Working women have higher protein (%) consumption compared to non-working women, while energy (kcal), carbohydrate (g and %) intake is lower ($p < 0.05$). There was no difference in the median of consumption of other macronutrients according to the working status of women ($p > 0.05$). Cholesterol (mg) consumption was observed to be lower in working women compared to non-working women ($p < 0.05$) (Table 3).

		Working women (s = 148)			Non-working women (s = 148)		
	X̄ ± SS	Medyan [IQR]	Bottom-Top	X̄ ± SS	Median [IQR]	Bottom-Top	p
Perceived Stress Scale	35,09 ± 6,48	34 [31-40]	19-49	35,41 ± 6,71	35 [30-40]	19-54	0,919
Uncontrolled eating	29,37 ± 17,07	26,67 [13,33-40]	0-80	33,65 ± 17,53	33,33 [20-46,67]	0-86,67	0,043*
Emotional eating	24,44 ± 22,07	16,67[0-41,67]	0-75	30,74 ± 23,31	25 [8,33-50]	0-75	0,018*
Cognitive restriction	59,57 ± 18,69	61,11 [44,44-72,22]	22,22-100	54,88 ± 19,35	55,56 [38,89-72,22]	0-100	0,055
Sensitivity to hunger	24,04 ± 18,51	25 [8,33-33,33]	0-83,33	26,41 ± 19,45	25 [8,33-41,67]	0-83,33	0,311
DIA negative	4,55 ± 1,05	4,57 [3,71-5,36]	1,5-6,64	4,68 ± 1,01	4,71 [3,79-5,5]	2,5-6,64	0,416
DAY positive	5,36 ± 0,80	5,19 [5-5,75]	3,25-8	5,03 ± 0,71	5 [4,5-5,38]	3-7,63	<0,001*

Table 2: Working and non-working woman Emotional Appetite Questionnaire, Three-Factor Nutrition, Nutrition Questionnaire and Perceived Stress Scale average score.

Mann Whitney U test, $p < 0.05$, DIA: Emotional Appetite Questionnaire.

Energy and nutrients	Working women (s = 148)		Non-working women (s = 148)		p
	X̄ ± SS	Medyan [IQR]	X̄ ± SS	Medyan [IQR]	
Energy (kcal)	1764,68 ± 320,92	1724,16 [1533,8-1904,03]	1858,53 ± 417,81	1815,01 [1555,53-2108,93]	0,038*
Protein (g)	63,7 ± 13,82	62,08 [54,95-71,13]	62,95 ± 15,64	61,90 [52,66-73]	0,791
Protein%	14,93 ± 2,75	15 [13-17]	14,04 ± 2,82	14 [12-16]	0,007*
Fat (g)	78,11 ± 20,20	73,39 [63,24-89,41]	81,14 ± 22,38	76,13 [63,87-92,67]	0,252
Fat%	39,17 ± 5,17	40 [36-42,75]	38,75 ± 4,56	39 [36-42]	0,500
Carbohydrates (g)	196,9 ± 40,19	192,12 [169,43-219,44]	214,13 ± 52,2	215,59 [173,99-247,72]	0,001*
Carbohydrate %	45,86 ± 5,43	46 [42-49]	47,12 ± 4,82	47 [44-50]	0,030*
Lif (g)	25,06 ± 8,10	24,63 [18,71-29,52]	26,09 ± 9,72	24,85 [18,99-33,36]	0,489
Your (g)	807,44 ± 301,93	793,24 [582,82-962,68]	832,04 ± 303,47	837,59 [609,64-1037,76]	0,324
Omega 3 fatty acid (g)	1,46 ± 0,97	1,13 [0,86-1,65]	1,65 ± 1,34	1,22 [0,86-1,82]	0,660
Omega 6 fatty acid (g)	12,31 ± 7,35	10,38 [6,54-15,57]	12,65 ± 7,57	11,37 [6,56-16,99]	0,643
Monounsaturated fatty acids (g)	32,79 ± 9,88	31,58 [25,69-37,87]	34,05 ± 9,81	32,24 [27,03-40,27]	0,267
Polyunsaturated fatty acids (g)	14,05 ± 7,73	12,68 [8,3-17,22]	14,70 ± 8,40	13,14 [7,95-20,1]	0,575
Saturated fatty acids (g)	25,76 ± 8,88	23,73 [19,31-31,4]	26,69 ± 9,69	24,83 [20,04-32,77]	0,395
Cholesterol (mg)	230,06 ± 140,21	196,53 [113,29-330,31]	262,01 ± 135,26	265,19 [140,11-356,18]	0,030*
K Vitamins (µg)	190,49 ± 236,71	87,98 [48,21-185,06]	165,80 ± 202,19	98,19 [51,98-177,98]	0,927
Vitamin A (µg)	1120,38 ± 1438,95	729,39 [512,15-1219,95]	984,02 ± 1035,17	761,39 [527,4-1095,16]	0,894
Carotene (mg)	3,92 ± 4,4	2,21 [1,07-4,85]	3,25 ± 3,26	2,06 [1,46-3,78]	0,780
Vitamin E (equivalent) (mg)	16,81 ± 9,28	14,96 [10,69-21,11]	17,03 ± 8,97	15,43 [10,55-21,25]	0,720
Vitamin B_1(mg)	0,97 ± 0,27	0,92 [0,78-1,15]	1,02 ± 0,30	1 [0,82-1,22]	0,149
Biotin (µg)	44,02 ± 15,18	42,8 [32,81-52,57]	46,65 ± 16,09	46,14 [35,18-55,91]	0,092
Vitamin B_2(mg)	1,29 ± 0,43	1,24 [0,94-1,53]	1,35 ± 0,45	1,3 [1,1-1,58]	0,171
Pantothenic acid (mg)	4,83 ± 1,56	4,60 [3,82-5,38]	5,04 ± 1,66	4,74 [3,81-5,97]	0,207
Vitamin B_6 (mg)	1,35 ± 0,42	1,32 [1-1,67]	1,35 ± 0,47	1,32 [1,01-1,64]	0,962
Vitamin B_{12}(µg)	4,07 ± 4,29	3,04 [1,9-5,13]	3,52 ± 3,69	2,74 [1,86-4,08]	0,263
Folic acid (µg)	319,93 ± 114,33	305,78 [235,6-376,65]	329,07 ± 126,31	314,71 [229,11-412,7]	0,534

Vitamin C (mg)	152,21 ± 91,81	131,76 [84,71-206,06]	164,19 ± 108,65	150,54 [77,89-212,53]	0,504
Sodium (dietary) (mg)	2293,88 ± 905,77	2191,63 [1695,31-2726,99]	2327,66 ± 984,65	2202,52 [1604,24-2947,33]	0,824
Potassium (mg)	2599,68 ± 659,95	2491,13 [2150,94-3038,41]	2648,62 ± 754,84	2568,09 [2189,74-3125,81]	0,559
Calcium (mg)	735,66 ± 252,72	737,98 [555,41-894,34]	793,41 ± 330,50	739,09 [563,14-964,01]	0,247
Magnesium (mg)	294,85 ± 93,39	281,8 [227,68-344,29]	291,61 ± 87,70	280,69 [224,19-337,4]	0,888
Phosphorus (mg)	1106,25 ± 248,16	1078,58 [925,34-1251,87]	1129,49 ± 279,71	1130,22 [924,02-1273,08]	0,458
Iron (mg)	11,26 ± 3,5	10,71 [8,63-13,44]	11,09 ± 3,97	10,42 [7,99-13,34]	0,475
Copper (mg)	1,41 ± 0,54	1,29 [1,07-1,57]	1,46 ± 0,56	1,35 [1,06-1,81]	0,409
Zinc (mg)	9,12 ± 2,92	8,66 [6,92-10,89]	8,46 ± 2,61	8,20 [6,83-10,23]	0,109
Alcohol (g)	0,14 ± 1,16	0 [0-0]	0,29 ± 1,93	0 [0-0]	0,061

Table 3: According to the study status of the participants, the average ($\bar{x}$), standard deviation (SS), median (M) and IQR values of daily dietary cell energy and some nutrients.

Mann Whitney U test, $p < 0,05$.

Similarly, in working and non-working women, a positive, linear relationship was found between emotional eating and energy (kcal), protein (g), fat (g), carbohydrate (g), monounsaturated fatty acid (g), saturated fatty acid (g), copper (mg) intake ($p < 0.05$). In working women, a positive linear relationship was found between the ASE score and carbohydrate (g) and saturated fatty acid (g) intake, weakly and positive linear relationship between energy (kcal), alcohol (g) and vitamin C (mg) intake ($p < 0.05$). As the intake of these nutrients increases in working women, there is also an increase in the ASE score. In addition, a negative, linear relationship was found between ASE score and protein (%) intake in working women ($p < 0.05$). Similarly, in working and non-working women, a linear relationship was found between the DIA negative score and energy (ccal), fat (g), monounsaturated fat (g) and saturated fatty acid (g) intake ($p < 0.05$). In addition, a linear relationship was found between DIA negative score and protein (g) in working women and between carbohydrate (g) and DIA negative score in non-working women ($p < 0.05$).

In working and non-working women, a positive linear relationship was found between emotional eating and DIA negative emotion, DIA negative status, DIA negative score and ASE score ($p < 0.05$). A positive linear relationship was found between emotional eating and DIA negative state, DIA negative negative score and ASE score, and a negative linear relationship between emotional eating and DIA positive emotion was found ($p < 0.05$). While there was a negative relationship between emotional eating and DIA positive emotion in both groups, a negative relationship between DIA positive score and emotional eating was found only in working women ($p < 0.05$). There was no linear relationship between WHO scores and DIA sizes in working women ($p > 0.05$). In non-working women, a positive linear relationship was found between DIA negative emotion, DIA negative status, and DIA negative scores ($p < 0.05$) (Table 4,5).

Argument

In addition to the physiological needs of individuals, food selection and consumption are affected by many factors such as education status, socioeconomic level, income status. In a study conducted with 797 women who examined the obesity prevalence and healthy lifestyle behaviors of housewives and working women, it was found that the education level of working women was higher than housewives and that they were in primary school with a rate of 49.1% and at the university level with a rate of 61.8% of working women [16]. In this study, while the rate of literate, primary and secondary school graduates was higher in non-working women, the rate of high school, university and graduate graduates was higher in working women ($p < 0.05$).

When the distribution of working and non-working women according to occupational groups is examined, according to the 2017 report of the Turkish Statistical Institute (TurkStat), the labor force participation rate of women is 33.6%. 55.4% of the women who are not included in the labor force are housewives, 11.3% are students and 5.2% are retirees [17]. In this study, while the rate of being retired, housewife and student was higher in non-working women, the rate of civil servant, self-employment and worker was higher in working women ($p < 0.05$).

Emotional eating is defined as eating in response to negative emotions without following the inner hunger cues [18]. Physical and emotional exhaustion from exposure to stress and negative

	3-FACTOR NUTRITION QUESTIONNAIRE												Perceived Stress Scale				DAY							
	Employee women						Non-working women						Employee women		Women who don't work		Employee women				Non-working women			
	Kontrolsüz Eating		Sentimental Eating		Cognitive constraint		Eating without kontrol		Sentimental Eating		Cognitive restriction						DAY negative		DAY positive		DAY negative		DAY positive	
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p
Energy (kcal)	0,365	<0,001	0,348	<0,001	-0,324	<0,001	0,258	0,002	0,332	<0,001	-0,233	0,004	0,189	0,022	0,116	0,160	0,329	<0,001	-0,144	0,081	0,238	0,004	0,032	0,701
Protein (g)	-0,002	0,983	0,201	0,014	-0,077	0,353	0,102	0,216	0,196	0,017	-0,089	0,284	-0,091	0,273	0,014	0,867	0,260	0,001	-0,230	0,005	0,133	0,107	0,180	0,029
Protein %	-0,333	<0,001	-0,151	0,067	0,271	0,001	-0,162	0,049	-0,118	0,155	0,193	0,019	-0,249	0,002	-0,119	0,150	-0,083	0,314	-0,049	0,550	-0,093	0,263	0,212	0,010
Fat (g)	0,258	0,002	0,309	<0,001	-0,287	<0,001	0,252	0,002	0,322	<0,001	-0,227	0,006	0,071	0,389	0,069	0,408	0,322	<0,001	-0,100	0,226	0,266	0,001	-0,025	0,765
Fat%	0,070	0,396	0,129	0,117	-0,102	0,217	0,145	0,079	0,123	0,135	-0,145	0,079	-0,055	0,510	0,003	0,974	0,151	0,067	-0,009	0,912	0,177	0,031	-0,157	0,056
Carbohydrates (g)	0,364	<0,001	0,278	0,001	-0,292	<0,001	0,206	0,012	0,262	0,001	-0,205	0,012	0,288	<0,001	0,109	0,188	0,224	0,006	-0,117	0,156	0,162	0,050	0,029	0,728
Carbohydrate %	0,107	0,197	-0,039	0,635	-0,027	0,747	-0,051	0,537	-0,054	0,514	0,032	0,699	0,154	0,061	0,062	0,457	-0,091	0,271	0,054	0,515	-0,129	0,118	0,035	0,669
Lif (g)	0,012	0,889	0,046	0,578	0,054	0,516	-0,072	0,387	0,079	0,342	0,204	0,013	0,058	0,482	-0,090	0,278	0,059	0,474	-0,120	0,147	0,024	0,772	0,075	0,366
Your (g)	-0,060	0,467	-0,051	0,541	0,066	0,427	-0,161	0,051	0,082	0,322	0,213	0,009	0,179	0,030	-0,071	0,394	-0,037	0,656	-0,022	0,786	-0,041	0,620	-0,006	0,943
n-3 fatty acids (g)	0,207	0,012	0,163	0,048	-0,097	0,239	0,059	0,474	0,119	0,150	-0,053	0,523	0,060	0,468	-0,021	0,802	0,213	0,009	-0,105	0,206	0,075	0,366	0,062	0,455
n-6 fatty acids (g)	0,106	0,201	0,088	0,288	-0,070	0,395	0,246	0,003	0,155	0,060	-0,276	0,001	-0,149	0,071	0,033	0,688	0,180	0,029	-0,057	0,489	0,160	0,052	-0,020	0,808
n-9 fatty acids (g)	0,104	0,207	0,226	0,006	-0,158	0,055	0,110	0,185	0,247	0,002	-0,018	0,833	0,052	0,528	-0,026	0,753	0,235	0,004	-0,112	0,174	0,227	0,006	-0,136	0,100
Polyunsaturated fatty acids(g)	0,112	0,174	0,102	0,217	-0,078	0,344	0,255	0,002	0,160	0,051	-0,275	0,001	-0,156	0,059	0,037	0,659	0,196	0,017	-0,063	0,449	0,167	0,043	-0,004	0,960
Saturated fat acids (g)	0,309	<0,001	0,318	<0,001	-0,312	<0,001	0,191	0,020	0,311	<0,001	-0,212	0,010	0,211	0,010	0,109	0,186	0,280	0,001	-0,175	0,033	0,212	0,010	0,022	0,792
Cholesterol (mg)	0,065	0,433	0,186	0,024	-0,119	0,151	0,015	0,853	0,062	0,457	0,047	0,574	0,153	0,063	-0,076	0,356	0,134	0,105	-0,165	0,045	0,077	0,352	-0,004	0,964
K Vitamins (µg)	-0,197	0,016	-0,117	0,158	0,147	0,074	-0,174	0,035	-0,116	0,161	0,190	0,020	-0,027	0,744	-0,109	0,187	-0,020	0,807	-0,042	0,612	0,008	0,927	-0,082	0,322
Vitamin A (µg)	-0,066	0,425	0,052	0,529	0,026	0,756	-0,002	0,981	0,031	0,704	0,066	0,427	0,068	0,410	0,005	0,953	0,094	0,256	-0,075	0,365	0,003	0,976	0,010	0,904

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Carotene (mg)	-0,096	0,244	-0,018	0,824	0,097	0,243	-0,065	0,435	-0,088	0,289	0,102	0,216	0,003	0,973	-0,044	0,599	0,052	0,533	-0,040	0,632	-0,070	0,397	-0,023	0,782
Vitamin E (equind) (mg)	0,074	0,370	0,047	0,567	-0,033	0,689	0,211	0,010	0,103	0,211	-0,191	0,020	-0,093	0,263	-0,005	0,949	0,117	0,158	-0,012	0,886	0,152	0,065	0,028	0,740
$Vitamin_{B1}$(mg)	-0,026	0,755	0,163	0,047	0,059	0,477	-0,100	0,228	0,006	0,940	0,185	0,025	-0,018	0,826	-0,092	0,264	0,182	0,027	-0,175	0,033	-0,014	0,865	0,008	0,919
Biotin (µg)	-0,013	0,874	0,061	0,465	0,018	0,830	-0,126	0,128	0,105	0,203	0,244	0,003	0,121	0,142	-0,147	0,074	0,095	0,249	-0,155	0,060	0,034	0,682	0,060	0,466
Vitamin B_2 (mg)	-0,192	0,020	0,012	0,886	0,121	0,143	-0,126	0,126	0,096	0,243	0,107	0,197	0,031	0,704	-0,045	0,586	0,056	0,500	-0,115	0,165	0,003	0,974	0,071	0,389
Pantothenic acid (mg)	-0,007	0,929	0,042	0,613	0,083	0,315	-0,046	0,578	0,138	0,094	0,128	0,120	0,057	0,492	-0,056	0,498	0,022	0,793	-0,121	0,144	0,030	0,714	0,010	0,908
Vitamin B_6 (mg)	-0,133	0,106	-0,048	0,561	0,063	0,447	-0,062	0,451	0,037	0,657	0,193	0,019	-0,062	0,455	-0,124	0,134	-0,017	0,835	-0,127	0,124	-0,008	0,924	0,072	0,386
Vitamin B_{12}(µg)	-0,213	0,009	-0,098	0,234	0,102	0,217	-0,018	0,827	0,128	0,120	-0,012	0,885	-0,086	0,298	0,060	0,467	-0,008	0,927	0,030	0,715	0,140	0,089	0,155	0,060
Folic acid (µg)	-0,144	0,082	0,008	0,927	0,180	0,028	-0,049	0,555	0,040	0,625	0,155	0,061	0,040	0,629	0,001	0,993	0,100	0,225	-0,068	0,413	0,026	0,752	0,072	0,387
Vitamin C (mg)	-0,067	0,416	-0,055	0,507	0,108	0,192	-0,149	0,071	-0,047	0,571	0,225	0,006	0,197	0,016	-0,120	0,148	-0,096	0,246	-0,039	0,634	-0,044	0,592	-0,123	0,136
Sodium (mg)	0,086	0,300	0,040	0,630	-0,007	0,933	0,086	0,298	0,128	0,121	-0,178	0,031	0,099	0,231	0,040	0,633	0,070	0,398	-0,008	0,919	0,026	0,755	0,088	0,286
Potassium (mg)	-0,059	0,479	0,044	0,592	0,128	0,121	-0,112	0,177	0,098	0,236	0,197	0,017	0,039	0,635	-0,057	0,488	0,098	0,236	-0,118	0,152	0,028	0,734	0,093	0,263
Calcium (mg)	-0,063	0,443	-0,009	0,916	0,055	0,508	-0,010	0,906	0,174	0,034	-0,012	0,890	0,103	0,213	0,061	0,458	0,056	0,501	-0,161	0,051	0,051	0,541	0,087	0,296
Magnesium (mg)	-0,066	0,428	0,204	0,013	-0,021	0,796	-0,045	0,584	0,152	0,065	0,096	0,246	-0,030	0,717	-0,050	0,549	0,224	0,006	-0,222	0,007	0,058	0,486	0,113	0,170
Phosphorus (mg)	-0,073	0,376	0,161	0,051	0,021	0,801	-0,011	0,898	0,171	0,037	0,049	0,558	-0,032	0,701	-0,012	0,888	0,229	0,005	-0,270	0,001	0,089	0,281	0,135	0,102
Iron (mg)	-0,072	0,386	0,158	0,056	0,039	0,635	-0,055	0,506	0,098	0,235	0,122	0,140	0,037	0,651	-0,082	0,324	0,112	0,176	-0,174	0,035	0,074	0,368	0,062	0,451
Copper (mg)	0,142	0,086	0,205	0,012	-0,022	0,788	0,059	0,477	0,208	0,011	-0,032	0,702	0,084	0,310	-0,057	0,488	0,200	0,015	-0,141	0,086	0,091	0,273	0,091	0,273
Zinc (mg)	-0,101	0,221	0,117	0,155	-0,033	0,692	-0,010	0,903	0,212	0,010	0,027	0,749	-0,066	0,428	0,053	0,522	0,181	0,027	-0,194	0,018	0,186	0,024	0,088	0,288
Alcohol (g)	0,183	0,026	0,137	0,097	-0,152	0,066	0,101	0,221	0,024	0,771	-0,178	0,030	0,188	0,022	-0,047	0,572	0,169	0,040	-0,099	0,232	0,008	0,923	-0,011	0,891

Table 4: According to the working status of the participants, the relationship between the Three Factor Eating Questionnaire, Emotional Appetite Questionnaire and Perceived Stress Scale scores and daily dietary flood energy and some nutrients.

Spearman Korelasyon, $p < 0,05$.

Component/Scale		Three-Factor Eating Questionnaire				ASÖ
		Uncontrolled Eating	Emotional eating	Cognitive restriction	Sensitivity to hunger	
Working women						
DIA negative emotion	r	0,324	0,806	0,404	-0,379	0,094
	p	<0,001	<0,001	<0,001	<0,001	0,255
DIA positive emotion	r	0,027	-0,330	-0,014	0,093	-0,011
	p	0,748	<0,001	0,869	0,260	0,899
DIA negative status	r	0,259	0,689	0,227	-0,254	0,088
	p	0,001	<0,001	0,006	0,002	0,286
DIA positive status	r	-0,023	-0,076	-0,074	0,066	-0,045
	p	0,777	0,358	0,368	0,426	0,591
DIA negative	r	0,308	0,802	0,345	-0,349	0,085
	p	<0,001	<0,001	<0,001	<0,001	0,302
DIA positive	r	-0,024	-0,218	-0,065	0,101	-0,053
	p	0,770	0,008	0,433	0,220	0,519
Perceived Stress Scale	r	0,435	0,260	0,321	-0,266	1,000
	P	<0,001	0,001	<0,001	0,001	
Women who don't work						
DIA negative emotion	r	0,430	0,812	0,416	-0,306	0,294
	p	<0,001	<0,001	<0,001	<0,001	<0,001
DIA positive emotion	r	-0,155	-0,296	-0,152	0,085	-0,130
	p	0,061	<0,001	0,065	0,305	0,114
DIA negative status	r	0,446	0,615	0,384	-0,280	0,319
	p	<0,001	<0,001	<0,001	0,001	<0,001
DIA positive status	r	-0,016	-0,018	0,051	0,057	-0,026
	p	0,848	0,832	0,535	0,488	0,750
DIA negative	r	0,462	0,777	0,426	-0,310	0,316
	p	<0,001	<0,001	<0,001	<0,001	<0,001
DIA positive	r	-0,092	-0,157	-0,035	0,061	-0,073
	p	0,266	0,057	0,669	0,464	0,379
Perceived Stress Scale	r	0,486	0,293	0,373	-0,458	1,000
	p	<0,001	<0,001	<0,001	<0,001	

Table 5: Three-Factor Eating Questionnaire, Emotional Appetite Questionnaire and Perceived Stress Scale Relationship between scores. Spearman Correlation, DIA: Emotional Appetite Questionnaire, $p < 0.05$.

emotions can have a negative impact on eating habits and behaviors [19]. In a study in which the eating behaviors of working and non-working women of Uluçay [20] were examined, there was no significant difference between uncontrolled and emotional eating scores according to the working status, while the cognitive restriction score of working women was found to be statistically significantly higher than the scores of non-working women. In this study, while there was no significant difference between the cognitive restriction scores of the participants according to the study status ($p > 0.05$), the uncontrolled eating and emotional eating scores of the working women were found to be lower ($p < 0.05$).

It has generally been found to be more prone to increasing food consumption when women are under stress. Work stress can lead to unbalanced eating behaviors, such as overeating [21]. In a study conducted by Bilgiç, the average stress scale scores of working women were found to be higher than those of non-working women [22]. In this study, there was no significant difference between working and non-working women in terms of perceived stress scale scores ($p > 0.05$).

How different emotional states affect the eating behaviors of individuals in eating processes has been examined in research.

Although there are differences between individuals, negative emotions such as stress, anxiety, depression, and anger have been found to increase food consumption and disrupt eating habits [23]. In one study, negative mood and emotional eating were positively associated [24]. In this study, a positive relationship was found between emotional eating and DIA negative emotion and DIA negative score in working and non-working women ($p < 0.05$). It has also been shown that negative emotions and situations are associated with uncontrolled eating and indirectly affect increased food intake with emotional eating [25]. In this study, a positive relationship was found between uncontrolled eating and DIA negative emotion, DIA negative status and DIA negative scores in working and non-working women ($p < 0.05$).

Working individuals with high levels of work stress had higher scores of emotional eating behavior [26]. In one study, perceived stress was positively associated with both emotional eating and overeating. But only in women has a significant association been reported between perceived stress, emotional eating, and overeating. Accordingly, it has been noted that among women, it may be an important goal to reduce perceived stress, overeating, and emotional eating [11]. Other studies have associated perceived stress and emotional eating scores [27]. In this study, while there was a positive relationship between emotional nutrition and ASE scores of both working and non-working women, this relationship was stronger in non-working women ($p < 0.05$).

Excessive energy intake may cause an increase in body weight, while less intake may cause a decrease in body weight. In a thesis study in which the food consumption status of women was evaluated, it was found that the daily energy intake of working women in Izmir and Ankara was higher than the energy they should receive [28]. The average energy intake of working women who participated in this study was found to be lower than that of non-working women ($p < 0.05$).

In Turkey and many countries, the energy and nutrient intake levels of individuals vary according to their characteristics [2]. In Civelek's research, energy intake did not show a significant difference between working and non-working women, while the percentage of fat taken in by diet was higher in working women [29]. In a study that examined the eating habits of working women and housewives, protein consumption was found to be higher in working women [30]. In this study, protein (%) consumption was higher in working women compared to non-working women, while carbohydrate (g) and carbohydrate (%) intake was lower ($p < 0.05$). While the energy from protein was higher in the food consumption of working women, the energy from carbohydrates was higher in non-working women.

Emotional states can have major effects on eating behavior and can lead to overeating or undereating, as well as affect food consumption. Another study found a positive relationship between emotional eating and energy intake [24]. A similar result was found for uncontrolled eating, while it was associated with fat intake for uncontrolled eating [31]. In the study by Farhangi., *et al*. [32], emotional eating was associated with increased fat (g) and protein (g) consumption. In the study conducted by Kestilako., *et al*. [33], uncontrolled eating was associated with consuming salty and fatty foods, while emotional eating was associated with consumption of sweet and fatty foods. One study found that cognitive restriction was associated with decreased energy, fat, and carbohydrates, while emotional eating was associated with it [34]. In another study, cognitive restriction was associated with lower energy intake [35]. In the working and non-working women participating in this study, it was found that energy and energy and protein (g), fat (g), carbohydrate (g) intake increased as the emotional and uncontrolled eating score increased ($p < 0.05$), while energy intake and carbohydrate intake decreased and protein intake increased as the cognitive restriction score increased ($p < 0.05$).

When the relationship between the participants' energy and nutrient consumption and DIA scores was examined; In the studies conducted, it was observed that individuals ate more under negative emotions, but there was no increase in appetite under positive emotions and even a negative effect [36]. In this study, while there was no relationship between positive emotions and energy intake, the increase in negative emotions and energy increased in a positive way ($p < 0.05$). In one study of women, positive emotions were associated with low-fat eating [37]. In this study, while this relationship was not observed with positive emotions, a positive linear relationship between negative emotions and fat intake was observed ($p<0.05$).

High perceived stress was linked to normal stress, poorer diet quality, greater intake of snack foods and lower fruit intake, increased disinhibition and overeating [38]. Studies have reported an increase in dietary fat intake as the perceived stress score value increases [39]. Stress has also been linked to increased energy intake due to higher consumption of delicious foods, especially fats and sugars [40]. In one study, a perceived stress score was associated with increased energy and saturated fat intake and decreased dietary fiber [41]. In this study, a positive relationship was found between perceived stress scale scores and women who studied saturated fat intake ($p < 0.05$). The effect of a stressful event on food consumption was investigated in 225 male and female high school students. Total energy intake on the experimental day was reported to be higher than on the stress-free day [42]. In this study, this similarity was detected in working women ($p < 0.05$). Another study found that higher perceived stress was associated with greater energy intake from fat, high-fat snacks and fast-food products, as well as lower energy intake from carbohydrates [43]. Similarly in this study, while the ASE score increased in working

women, energy, carbohydrate (g) and saturated fatty acid (g), alcohol (g) intake increased but protein (%) intake decreased ($p < 0.05$). In non-working women, there was no linear relationship between the ASE score and the energy they receive from the daily diet and some nutrients ($p > 0.05$).

Discussion and Conclusion

In response to stress, the hypothalamus signals the secretion of catabolic hormones, glucocorticoids, catecholamines (epinephrine and norepinephrine) and glucagon. These hormones cause increased protein catabolism, resulting in the loss of fat and lean body tissues [44]. In a study, it was reported that the stress levels of housewives were significantly higher than nurses. The daily protein intake found was found to be less in housewives compared to nurses. Protein intake has been shown to have a negative relationship with stress intake [45]. In this study, protein (%) consumption was higher in working women compared to non-working women ($p < 0.05$). As protein (%) intake increases in working women, a decrease in ASE score is observed.

Stress has been shown to encourage the intake of highly palatable and nutrient-poor foods and snacks [46,47]. In one meta-analysis study, a significant negative relationship was found between stress and diet quality [48]. This has shown that stress is significantly associated with unhealthy eating patterns. This potentially significant effect of stress suggests that easy access to cheap and highly palatable foods is common, and that excessive consumption of these types of foods can increase the risk of obesity, diabetes and cardiovascular disease [49]. Socioeconomic status can also affect access to and selection of food, and therefore dietary intake, and low-cost food contains a high percentage of fat and is poor in nutrient content. In contrast, limited access to healthy foods can be a source of stress and is linked to perceived stress [50]. As a result, because negative emotions, stress, and emotional eating are important in daily life, a better understanding can inform and contribute to a wide range of obesity prevention strategies.

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