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Examining The Relationship between Cyberchondria and Food Neophobia Levels with Nutritional Status and Anthropometric Measurements Among Blue-Collar Workers

Mavi Yaka Çalışanlarda Siberkondri ve Besin Neofobi Düzeylerinin Beslenme Durumu ve Antropometrik Ölçümler ile İlişisinin İncelenmesi

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Abstract

Objective: Adequate and balanced nutrition among blue-collar workers is critical for improving work efficiency and maintaining occupational health. Food neophobia and cyberchondria can influence food intake, thereby altering anthropometric measurements. This study aimed to examine the effects of these two factors among blue-collar workers.

Materials and Methods: This cross-section and observational study included 201 participants. Data were collected using the Food Frequency Questionnaire, the Food Neophobia Scale (FNS), and the Cyberchondria Severity Scale (CSS-12). Analyses were performed using the SPSS 26 software, with a significance level set at $p<0.05$. Demographic information (age, sex, etc.), anthropometric measurements (weight, height, BMI), and BIA results were obtained through face-to-face interviews.

Results: Of the participants, 64.6% were male, with a mean age of 32.73 ± 5.61 years. A total of 55.7% were married, and 56.2% had a university degree; 51.7% worked regular shifts. The mean CSS total score was 30.51 ± 7.67 , and the mean FNS total score was 35.61 ± 9.14 . A statistically significant very weak negative correlation was found between body fat percentage and the “Reassurance Seeking” sub-factor scores of the CSS ($s=-0.150$; $p<0.05$). Additionally, a positive correlation was identified between age and FNS total scores ($s=0.140$; $p<0.05$).

Öz

Amaç: Mavi yaka çalışanlarda yeterli ve dengeli beslenme, iş verimliliğini artırmak ve mesleki sağlığı korumak açısından kritik öneme sahiptir. Besin neofobisi ve siberkondri, besin alımını etkileyerek antropometrik ölçümlerde değişikliklere neden olabilir. Bu çalışma, mavi yaka çalışanlar arasında bu iki faktörün etkilerini incelemeyi amaçlamaktadır.

Materyal ve Yöntem: Bu kesitsel ve gözlemsel çalışma, 201 katılımcıyı içermektedir. Veriler, Besin Tüketim Sıklığı Anketi, Besin Neofobisi Ölçeği (BNÖ) ve Siberkondri Ciddiyet Ölçeği (SCÖ-12) kullanılarak toplanmıştır. Analizler SPSS 26 yazılımı kullanılarak yapılmış ve anlamlılık düzeyi $p<0.05$ olarak belirlenmiştir. Demografik bilgiler (yaş, cinsiyet vb.), antropometrik ölçümler (ağırlık, boy, BKİ) ve BIA sonuçları yüz yüze görüşmeler ile elde edilmiştir.

Bulgular: Katılımcıların %64,6’sı erkek olup, yaş ortalaması $32,73\pm5,61$ yıldır. Katılımcıların %55,7’si evli, %56,2’si üniversite mezunu ve %51,7’si düzenli vardiyada çalışmaktadır. Ortalama SCÖ toplam puanı $30,51\pm7,67$, ortalama BNÖ toplam puanı ise $35,61\pm9,14$ ’tür. Vücut yağ yüzdesi ile SCÖ’nün “Güvence Arayışı” alt faktörü puanları arasında istatistiksel olarak anlamlı, çok zayıf negatif bir ilişki bulunmuştur ($s=-0,150$; $p<0,05$). Ayrıca, yaş ile BNÖ toplam puanları arasında pozitif bir ilişki saptanmıştır ($s=0,140$; $p<0,05$).

Sonuç: Bulgular, yaşın artmasının besin neofobisini artırdığını, vücut yağ yüzdesindeki artışın ise siberkondri ile ilişkili güvence



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Conclusion: The findings indicate that increasing age increases food neophobia, while an increase in body fat percentage decreases reassurance-seeking behaviour associated with cyberchondria. These results emphasise the importance of blue-collar workers' eating habits on work efficiency and health.

Keywords Cyberchondria • food neophobia • blue-collar workers • anthropometric measurements • nutritional status

arayış davranışını azalttığını göstermektedir. Bu sonuçlar, mavi yaka çalışanların beslenme alışkanlıklarının iş verimliliği ve sağlık üzerindeki önemini vurgulamaktadır.

Anahtar Kelimeler Siberkondri • besin neofobisi • mavi yaka çalışanlar • antropometrik ölçümler • beslenme durumu

Author Note This study is derived from Mikail Çayır's master's thesis titled "Examining The Relationship between Cyberchondria and Food Neophobia Levels with Nutritional Status and Anthropometric Measurements Among Blue-Collar Workers

INTRODUCTION

Nutrition is a physiological process through which living organisms acquire the nutrients necessary for sustaining life (1). Therefore, nutrition is an essential process for the survival of every human being (2). The adequate intake of macro- and micronutrients from birth is essential not only for growth and development but also for the prevention of chronic diseases (3). Blue-collar workers are defined by the U.S. Department of Labour as those involved in "precision production, craft and repair occupations; machine operators and inspectors; transportation and material moving occupations; handlers, equipment cleaners, helpers, and labourers " (4). Blue-collar workers experience more health problems than white-collar workers due to lifestyle-related issues, including diet (5). The socioeconomic disadvantages experienced by these workers negatively affect their nutrition and physical activity levels (6). When examining workers' dietary habits, it is commonly agreed that they should consume half of their daily caloric needs during lunch with the remainder divided between breakfast and dinner (7). Blue-collar workers contribute to the labour force by working in various shift types. This situation leads to changes in the meal timing. The disruption of the circadian rhythm, combined with responsibilities brought by workload, alters food preferences, prompting workers to opt for higher-calorie, nutrient-poor foods. Similarly, socioeconomic and sociocultural structures influence workers' awareness of nutrition, thereby affecting their food choices (8).

Food neophobia is the tendency to avoid trying new and unfamiliar foods. This behavioural pattern is believed to begin in early childhood (9). It is considered one of the primary reasons why children reject healthy foods such as fruits and vegetables (10). Food neophobia can lead to reduced food variety and deficiencies in macro- and micronutrients. Increased selectivity in food choices and the growing list of avoided foods can also result in the development of rigid avoidant eating attitudes, especially in children (11). It is well-known that food neophobia decreases dietary diversity, thereby reducing the overall diet quality (12). Additionally, studies have shown a positive relationship between food

neophobia and conditions such as insulin resistance and type 2 diabetes. Specifically, individuals with higher food neophobia scores tend to have lower omega-3 intakes (13).

With the widespread use of the internet, individuals have increasingly sought to research their symptoms online (14). Cyberchondria is a term used to describe the pattern of excessive online medical research often accompanied by heightened anxiety or distress (14). This behaviour of attempting to self-diagnose illnesses through virtual platforms can damage individuals' relationships with healthcare providers and endanger their overall health (15). Cyberchondria is considered a public health issue, and various psychotherapeutic methods have been proposed as solutions to address it (15). When examining the relationship between cyberchondria and nutrition, the importance of nutritional literacy and general nutritional knowledge becomes obvious. Individuals with lower levels of nutritional knowledge tended to exhibit higher cyberchondria scores (16). Another link between nutrition and cyberchondria is that it may lead to an unhealthy obsession with healthy eating. Due to the vast amount of information available online about healthy eating and diets, excessive exposure to this information can result in unnecessary dietary restrictions and the development of orthorexia nervosa (17).

This study is being conducted to explore the multifaceted relationship between nutrition and various factors affecting it, including occupational influences, food neophobia, and cyberchondria. Blue-collar workers often face unique challenges in maintaining a balanced diet due to socioeconomic disadvantages and work-related lifestyle impacts that predispose them to obesity. Furthermore, food neophobia contributes to limited dietary diversity, which can lead to nutritional deficiencies and health issues such as insulin resistance. The rise of cyberchondria highlights the importance of nutritional literacy as individuals increasingly turn to the internet for health information, sometimes leading to unhealthy eating obsessions. Understanding these dynamics is crucial for developing strategies to improve nutritional habits and overall health outcomes.



MATERIALS AND METHODS

Study population

The study included aircraft maintenance and repair technicians working at an airline company. The participants' mean age was 32.73 ± 5.61 years, mean weight was 81.98 ± 17.99 kg, and mean BMI was 26.89 ± 4.42 . The sex distribution consisted of 35.3% women and 64.7% men. Among the participants, 97 (48.3%) worked in night shifts, while 104 (51.7%) worked in regular shifts.

Study design and protocol

Individuals under the age of 18, pregnant or breastfeeding mothers, and those with communication difficulties were excluded from the study. Data for the study were collected through face-to-face interviews conducted at the dietitian clinic located within the airline company's health unit.

Scales used in the study

Demographic information (age, sex, marital status, education level, and work type) and anthropometric measurements (weight, height, and BMI) of the participants were collected through face-to-face interviews by a trained dietitian. The Food Frequency Questionnaire was administered to assess dietary habits. The Food Neophobia Scale (FNS), originally developed by Pliner and Hobden, was used to assess participants' levels of food neophobia (18). The Turkish adaptation and validation of the scale was conducted by Duman et al. (19). The FNS consists of 10 items rated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree), with five items (Items 1, 4, 6, 9, and 10) being reverse-coded. The total scores ranged from 10 to 70, with higher scores indicating greater food neophobia. The Cyberchondria Severity Scale Short Form (CSS-12), developed by McElroy and Shevlin, was used to measure cyberchondria levels (20). The Turkish version of the CSS-12 was validated and published in the book "Davranışsal Boyutları ile Sağlık" by Uyar and Kırac (21). This scale includes 12 items scored on a 5-point Likert scale (1 = never to 5 = always), with no reverse-coded items. Higher scores indicate higher severity of cyberchondria. The total scale scores were calculated, and comparisons between genders were statistically analysed.

Ethical Statement

Written approval from the institution where the study was conducted and ethical approval with the number 15 were obtained from Üsküdar University (Date: 31.10.2024, No: 10). Informed consent was collected from all participants prior to the study. The data were collected between 02.11.2024 and 01.01.2025.

RESULTS

The descriptive statistics of health findings by sex among the study participants showed that 11.5% (15 individuals) of the male participants had chronic diseases, with 26.7% (4 individuals) diagnosed with diabetes. Among female participants, 15.5% (11 individuals) had chronic diseases, with 18.2% (2 individuals) diagnosed with asthma, 18.2% (2 individuals) with Hashimoto's thyroiditis, and 18.2% (2 individuals) with polycystic ovary syndrome (Table 1). When examining the descriptive statistics of habit-related findings by sex among the participants, it was found that 36.9% (48 individuals) of men smoked, 38.5% (50 individuals) engaged in regular physical activity, and 36% (18 individuals) performed weightlifting as a form of physical activity. Their average physical activity duration was 203.40 ± 73.22 minutes/day. Among women, 21.1% (15 individuals) smoked, 35.2% (25 individuals) engaged in regular physical activity, 44% (11 individuals) performed pilates, and their average physical activity duration was 160.80 ± 62.98 minutes/day (Table 1). It was found that the "Excessiveness" sub-factor scores of the CSS among the participants ranged from 4 to 15, with an average of 10.45 ± 2.59 ; the "Distress" sub-factor scores ranged from 3 to 15, with an average of 7.85 ± 2.49 ; the "Reassurance Seeking" sub-factor scores ranged from 3 to 15, with an average of 7.25 ± 2.68 ; the "Compulsion" sub-factor scores ranged from 3 to 13, with an average of 4.96 ± 2.15 ; and the "CSS Total" scores ranged from 13 to 54, with an average of 30.51 ± 7.67 (Table 2). It was also found that the FNS (Food Neophobia Scale) total scores of the participants ranged from 10 to 62, with an average of 35.61 ± 9.14 (Table 2).

A statistically significant very weak negative correlation ($s = -0.150$; $p < 0.05$) was found between the body fat percentage values of the participants and the "Reassurance Seeking" sub-factor scores of the CSS. When the result was examined, it was determined that as the body fat percentage values of individuals increased, the "Reassurance Seeking" sub-factor scores of the CSS decreased by 15% (Table 3). A statistically significant very weak positive correlation ($s = 0.140$; $p < 0.05$) was found between the ages of the participants and their total FNS (Food Neophobia Scale) scores. When the result was examined, it was determined that as the ages of individuals increased, their total FNS scores increased by 14% (Table 3). There was no statistically significant correlation ($p > 0.05$) between the total FNS (Food Neophobia Scale) scores and the CSS (Cyberchondria Severity Scale) sub-factor and the total scores of the participants (Table 4).

When examining the results, men were found to have statistically significantly higher values ($p<0.01$; $p<0.001$) compared to women in terms of "Energy (kcal)," "Carbohydrates (%)," "Saturated Fat (g)," "Monounsaturated Fat (g)," "Polyunsaturated Fat (g)," "Omega-3 (g)," "Omega-6 (g)," "Cholesterol (mg)," "Fibre (g)," "Vitamin A (μg)," "Vitamin E (mg),"

"Vitamin K (μg)," "Vitamin B1 (mg)," "Vitamin B2 (mg)," "Vitamin B6 (mg)," "Vitamin B12 (μg)," "Sodium (mg)," "Potassium (mg)," "Calcium (mg)," "Magnesium (mg)," "Phosphorus (mg)," "Iron (mg)" and "Zinc (mg)." On the other hand, women were found to have statistically significantly higher "Proteins (%)" values compared to men (Table 5).

Table 1. Demographic, Habitual, and Health Characteristics of Individuals by Sex

	Male (n=130)	Female (n=71)	Total (n=201)
Age (years) ($\bar{X}\pm\text{SD}$)	32.85 $\pm$ 5.56	32.51 $\pm$ 5.75	32.73 $\pm$ 5.61
Marital Status			
Married	74 (56.9%)	38 (53.5%)	112 (55.7%)
Single	56 (43.1%)	33 (46.5%)	89 (44.3%)
Educational Status			
High School	3 (2.3%)	1 (1.4%)	4 (2.0%)
Associate Degree	53 (40.8%)	4 (5.6%)	57 (28.4%)
Bachelor's Degree	61 (46.9%)	52 (73.2%)	113 (56.2%)
Postgraduate	13 (10.0%)	14 (19.7%)	27 (13.4%)
Work Pattern			
Regular Shift	42 (32.3%)	62 (87.3%)	104 (51.7%)
Shift Work	88 (67.7%)	9 (12.7%)	97 (48.3%)
Smoking Status			
Yes	48 (36.9%)	15 (21.1%)	63 (31.3%)
No	65 (50.0%)	49 (69.0%)	114 (56.7%)
Quit	17 (13.1%)	7 (9.9%)	24 (11.9%)
Regular Physical Activity			
Yes	50 (38.5%)	25 (35.2%)	75 (37.3%)
No	80 (61.5%)	46 (64.8%)	126 (62.7%)
Type of Physical Activity			
Weight Lifting	18 (36.0%)	0 (0.0%)	18 (24.0%)
Dance	0 (0.0%)	1 (4.0%)	1 (1.3%)
Fitness	13 (26.0%)	1 (4.0%)	14 (18.7%)
Stationary Cycling	1 (2.0%)	0 (0.0%)	1 (1.3%)
Running	2 (4.0%)	1 (4.0%)	3 (4.0%)
Pilates	0 (0.0%)	11 (44.0%)	11 (14.7%)
Walking	11 (22.0%)	10 (40.0%)	21 (28.0%)
Swimming	5 (10.0%)	1 (4.0%)	6 (8.0%)
Duration of Physical Activity (min/day) ($\bar{X}\pm\text{SD}$)	203.40 $\pm$ 73.22	160.80 $\pm$ 62.98	189.20 $\pm$ 72.42
Chronic Disease Status			
Yes	15 (11.5%)	11 (15.5%)	26 (12.9%)
No	115 (88.5%)	60 (84.5%)	175 (87.1%)
Types of Chronic Diseases			
Asthma	3 (20.0%)	2 (18.2%)	5 (19.2%)
Diabetes	4 (26.7%)	1 (9.1%)	5 (19.2%)
Gastritis	0 (0.0%)	1 (9.1%)	1 (3.8%)
Gilbert's Syndrome	1 (6.7%)	0 (0.0%)	1 (3.8%)
Hashimoto's Disease	0 (0.0%)	2 (18.2%)	2 (7.7%)

	Male (n=130)	Female (n=71)	Total (n=201)
Hypoglycaemia	0 (0.0%)	1 (9.1%)	1 (3.8%)
Hypothyroidism	2 (13.3%)	0 (0.0%)	2 (7.7%)
Migraine	1 (6.7%)	0 (0.0%)	1 (3.8%)
Mitral valve prolapse	1 (6.7%)	0 (0.0%)	1 (3.8%)
Polycystic ovary syndrome	0 (0.0%)	2 (18.2%)	2 (7.7%)
Popliteal artery entrapment syndrome	1 (6.7%)	0 (0.0%)	1 (3.8%)
Arrhythmia	1 (6.7%)	0 (0.0%)	1 (3.8%)
Rheumatoid Arthritis	0 (0.0%)	1 (9.1%)	1 (3.8%)
Psoriasis	1 (6.7%)	0 (0.0%)	1 (3.8%)
Spina Bifida	0 (0.0%)	1 (9.1%)	1 (3.8%)

Table 2. Summary statistics of the CSS sub-factors, total scores, and FNS total score

	Median (min-max)	$\bar{X} \pm SD$
Excessiveness	10 (4-15)	10.45±2.59
Distress	8 (3-15)	7.85±2.49
Reassurance Seeking	7 (3-15)	7.25±2.68
Compulsion	4 (3-13)	4.96±2.15
CSS Total	29 (13-54)	30.51±7.67
FNS Total	34 (10-62)	35.61±9.14

s: Spearman Rank Correlation Coefficient, CSS: Cyberchondria Severity Scale; FNS: Food Neophobia Scale

DISCUSSION

The study was conducted with the participation of 201 blue-collar workers and examined the effects of food neophobia and cyberchondria scales on nutrition, anthropometric measurements, BIA results, and nutritional status. Among the participants, 64.7% were male and 35.3% were female. Additionally, 48.3% of the participants worked in shift timetables.

One of the significant findings of the study is the statistically significant weak relationship between body fat percentage and Cyberchondria Severity Scale (CSS) scores. The results indicate a negative correlation between body fat percentage and the "Reassurance-Seeking" subfactor ($s=-0.150$; $p<0.05$).

Table 3. Correlation coefficients between age, anthropometric measurement values, CSS sub-factors, total scores, and FNS total scores

	Excessiveness	Distress	Reassurance Seeking	Compulsion	CSS Total	FNS Total
Age	$s=0.047$ $p=0.508$	$s=0.033$ $p=0.641$	$s=0.036$ $p=0.614$	$s=0.038$ $p=0.589$	$s=0.048$ $p=0.495$	$s=0.140$ $p=0.048^*$
BMI	$s=0.117$ $p=0.098$	$s=0.044$ $p=0.536$	$s=0.016$ $p=0.824$	$s=0.030$ $p=0.668$	$s=0.010$ $p=0.886$	$s=0.031$ $p=0.662$
Body fat percentage	$r-s=-0.026$ $p=0.709$	$r=-0.036$ $p=0.609$	$r=-0.150$ $p=0.034^*$	$s=-0.132$ $p=0.062$	$r=-0.105$ $p=0.140$	$r=0.013$ $p=0.859$
Lean Body Mass	$s=0.108$ $p=0.127$	$s=0.021$ $p=0.767$	$s=0.022$ $p=0.758$	$s=0.002$ $p=0.983$	$s=0.031$ $p=0.660$	$s=0.031$ $p=0.657$
Muscle Percentage	$s=0.005$ $p=0.940$	$s=-0.014$ $p=0.838$	$s=-0.083$ $p=0.242$	$s=-0.107$ $p=0.130$	$s=-0.068$ $p=0.338$	$s=-0.009$ $p=0.901$

r: Pearson Moment Correlation Coefficient; s: Spearman Rank Correlation Coefficient; CSS: Cyberchondria Severity Scale; FNS: Food Neophobia Scale, * $p<0.05$

It was observed that as the body fat percentage increased, the reassurance-seeking scores decreased. Contrary to this finding, a study by Amiri and Behnezhad reported a positive relationship between obesity and anxiety symptoms, indicating that an increased body mass index (BMI) may be associated with anxiety (22). However, no statistically significant relationship between high BMI and cyberchondria

was found in our study. This inverse relationship might stem from various factors, such as socio-cultural or psychological influences. Specifically, individuals' neglect of health risks or their coping mechanisms, which involve ignoring such risks, might result in lower levels of health anxiety. Supporting this view, Nasiri et al. emphasised the role of personality traits and health-related metacognitive beliefs in the development

of cyberchondria (23). Therefore, individuals with higher body fat percentages may experience less intense health-related anxiety, potentially due to different perceptions of health risks. These findings highlight the complexity of the relationship between health anxiety and cyberchondria, as well as the importance of individual differences.

A statistically significant positive relationship was found between age and food neophobia scores. Food neophobia scores increased with age ($s=0.140$; $p<0.05$). Consistent with our findings, some studies have also indicated that food neophobia levels tend to increase with age. In a study by Predieri et al., older individuals were observed to have difficulty adhering to a healthy diet and showed less compliance with diverse diets such as the Mediterranean diet (24). This indicates that individuals may become more hesitant about new and different foods as they age. Similarly, Hazley et al. examined the effect of age on food neophobia in a large population in Ireland and found that food neophobia levels increased in older individuals (25). This increase was thought to be due to heightened concerns about food safety and health risks as people age. Our result regarding age demonstrates that older individuals tend to be more cautious about new foods, aligning with the trends observed in the literature.

When examining the food consumption of individuals in the study, it was found that men had higher intake values than women for Energy (kcal), Carbohydrates (%), "Saturated Fat (g)," "Monounsaturated Fat (g)," "Polyunsaturated Fat (g)," "Omega-3 (g)," "Omega-6 (g)," "Cholesterol (mg)," "Fibre (g)," "Vitamin A (μ g)," "Vitamin E (mg)," "Vitamin K (μ g)," "Vitamin B1 (mg)," "Vitamin B2 (mg)," "Vitamin B6 (mg)," "Vitamin B12 (μ g)," "Sodium (mg)," "Potassium (mg)," "Calcium (mg)," "Magnesium (mg)," "Phosphorus (mg)," "Iron (mg)," and "Zinc (mg)". Conversely, women were found to have statistically higher "Protein (%)" intake values compared to men. Men's generally higher energy requirements were observed to parallel their increased intake of micronutrients. Overall, men's macro- and micronutrient needs are higher than women's (26).

In terms of saturated fat intake, both men and women were found to exceed the reference values (24). Excessive saturated fat intake increases the risk of cardiovascular diseases. A study by Koutsos et al. highlighted that high saturated fat intake could exacerbate health issues such as atherosclerosis and cardiovascular diseases (27). Omega-3 fatty acid intake was below the reference values for both men and women (26). Khan et al. reported that low omega-3 fatty acid intake could lead to health problems such as inflammation and heart diseases (28). Cholesterol intake was also above the reference

Table 4. Correlation coefficients between FNS total scores and CSS sub-factors and total scores

	FNS Total (s)	FNS Total (p)
Excessiveness	-0.106	0.135
Distress	-0.083	0.239
Reassurance Seeking	0.090	0.206
Compulsion	0.021	0.764
CSS Total	-0.043	0.544

s: Spearman's rank correlation coefficient; CSS: Cyberchondria severity scale; FNS: Food neophobia scale

Table 5. Comparison of energy, macronutrient, and micronutrient values by sex

	Male		Female		t-U	p-value
	($\bar{X}\pm SD$)	(Median, min-max)	($\bar{X}\pm SD$)	(Median, min-max)		
Energy (kcal)	2498.28 $\pm$ 401.54	2498.5 (1099.9-3276)	1854.73 $\pm$ 387.89	1754.1 (719.3-3013.6)	U=1153	<0.001***
Carbohydrates (%)	51.40 $\pm$ 5.05	52 (38-67)	49.08 $\pm$ 6.43	50 (26-63)	U=3513	0.005**
Proteins (%)	19.52 $\pm$ 2.48	20 (13-26)	20.94 $\pm$ 2.45	21 (17-28)	U=3323	<0.001***
Fats (%)	29.13 $\pm$ 5.24	28 (18-42)	29.97 $\pm$ 5.66	29 (20-47)	U=4206.5	0.299
Saturated Fat (g)	29.34 $\pm$ 6.41	29.9 (15-48.1)	22.27 $\pm$ 5.56	21.5 (12.8-38.6)	U=1810	<0.001***
Monounsaturated Fat (g)	26.26 $\pm$ 5.76	25.5 (14.1-42.9)	20.27 $\pm$ 5.46	19.4 (12.4-36.6)	U=1873	<0.001***
Polyunsaturated Fat (g)	23.12 $\pm$ 11.05	19.9 (11.1-59)	17.01 $\pm$ 7.24	14.9 (6-39.6)	U=2656	<0.001***
Omega-3 (g)	0.99 $\pm$ 0.18	1 (0.5-1.6)	0.77 $\pm$ 0.15	0.8 (0.5-1.2)	U=1596	<0.001***
Omega-6 (g)	21.85 $\pm$ 11.02	18.5 (10.1-57.6)	15.98 $\pm$ 7.17	13.8 (4.9-38.1)	U=2694.5	<0.001***
Cholesterol (mg)	415.76 $\pm$ 96.11	426.9 (170.1-854.7)	382.84 $\pm$ 141.47	362.6 (187.5-1276.7)	U=3074	<0.001***
Fibre (g)	33.33 $\pm$ 7.47	33.1 (12.9-57.4)	25.44 $\pm$ 6.54	25.7 (8.6-44.9)	U=1818.5	<0.001***

	Male		Female			
Vitamin A (µg)	965.21±268.93	949.1 (342.1-1589.2)	849.39±250.95	815.3 (386.9-1442.1)	U=3472	0.004**
Vitamin D (µg)	1.19±0.39	1.3 (0.4-3.6)	1.22±0.62	1.2 (0.4-5.3)	U=4143.5	0.232
Vitamin E (mg)	27.61±11.90	22.9 (13.4-66)	21.01±7.82	19.6 (9.2-46.3)	U=2761	<0.001***
Vitamin K (µg)	128.77±29.08	127.5 (56.1-217.4)	108.97±27.81	105.3 (58.8-176.2)	t=4.686	<0.001***
Vitamin B1 (mg)	1.43±0.30	1.4 (0.6-2.4)	1.11±0.25	1.1 (0.4-1.9)	t=7.423	<0.001***
Vitamin B2 (mg)	2.06±0.46	2 (1-3)	1.61±0.39	1.6 (0.9-2.8)	U=2067.5	<0.001***
Vitamin B6 (mg)	2.22±0.42	2.2 (0.9-3.3)	1.73±0.36	1.7 (0.6-2.7)	t=8.276	<0.001***
Vitamin B12 (µg)	7.69±2.29	7.9 (3-12)	5.79±1.84	5.6 (2.8-11.9)	U=2364	<0.001***
Sodium (mg)	1688.84±376.96	1678.1 (767.5-3018.6)	1304.24±311.00	1291.6 (739.7-2186.1)	U=1923	<0.001***
Potassium (mg)	3161.16±746.28	3143.2 (1312.3-5010)	2574.39±680.27	2490.6 (1312.3-4143.7)	U=2569	<0.001***
Calcium (mg)	890.62±259.00	881.3 (285.9-1347.2)	654.10±206.24	569.6 (247.9-1263.7)	U=2172	<0.001***
Magnesium (mg)	447.58±92.84	443.4 (183.1-730.7)	331.83±73.99	327.1 (105.7-537.4)	t=9.665	<0.001***
Phosphorus (mg)	1925.49±357.22	1869.9 (843.7-2831.6)	1463.43±286.30	1440.4 (543.7-2304.5)	U=1322	<0.001***
Iron (mg)	16.54±3.22	16.3 (7-25.2)	12.68±2.61	12.8 (3.9-19.7)	t=8.664	<0.001***
Zinc (mg)	17.65±3.40	17.5 (7.7-25.5)	13.64±2.71	13.4 (3.9-21.5)	U=1515	<0.001***

t: Independent Samples T-Test; U: Mann-Whitney U Test **p<0.01; ***p<0.001

values for both sexes (26). High cholesterol intake was identified as a risk factor for cardiovascular diseases in Carson et al. (29). Vitamin D intake was found to be insufficient in both sexes (25). Insufficient vitamin D intake may have adverse effects on the immune system (30). Calcium intake was also below the reference value for both sexes (26). Magnesium intake was above the reference value for both men and women (26). Fouhy et al. emphasised that the ratio of calcium to magnesium is crucial for musculoskeletal health (31). It was found that there was no statistically significant correlation ($p>0.05$) between the total FNS scores and the CSS sub-factor and the total scores of the participants.

Limitations

Our study was limited to blue-collar employees working in the aviation sector. This limitation makes it difficult to generalise the findings to blue-collar workers in other sectors or the general population. The proportion of male participants was higher than that of female participants (64.7% vs. 35.3%). This imbalance may limit the ability to obtain distinct results in sex comparisons. Data on eating habits were collected using self-reporting methods, which may introduce bias and limit the accuracy or completeness of the information provided by individuals. The study was conducted in a specific location of

a single company. Due to differences in location and social facilities, the findings may not represent blue-collar workers in other regions. Another limitation of this study is the inability to evaluate the biochemical parameters in conjunction with the nutritional status.

CONCLUSION

In conclusion, our study indicates that cyberchondria in blue-collar workers is associated with the 'Cyberchondria Reassurance-Seeking' subfactor and body fat percentage, while food neophobia may be related to age. Regarding the overall nutritional status, it was found that all employees had high saturated fat and cholesterol intake and inadequate Omega-3 and Vitamin D intake. Additionally, female employees were observed to have insufficient calcium intake. Studies with larger populations, conducted across multiple centres and designed prospectively, are needed in this area. Because the study was conducted within a single institution, this may pose a limitation in terms of sample homogeneity. A multicenter study involving a larger population could provide more robust data. In addition, including some biochemical parameters along with self-reports can yield more accurate nutritional data.



Ethics Committee Approval This study was approved by Üsküdar University (Date: 31.10.2024, No: 10).

Informed Consent Written informed consent was obtained from all participants who participated in this study.

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