ARAŞTIRMA / RESEARCH

Evaluation of Changes in Dietary Habits of Healthcare Professionals during COVID-19

COVID-19 Pandemi Sürecinde Sağlık Çalışanlarının Beslenme Alışkanlıklarındaki Değişikliklerin Değerlendirilmesi

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Abstract

Objective: The workload and working hours of healthcare professionals have increased due to the COVID-19 pandemic. The aim of this study was to evaluate how COVID-19 outbreak restrictions affect dietary habits among healthcare professionals.

Material and Method: The study population was 239 adults aged between 18-65 years. An online survey including questions about demographic variables, health information, lifestyle behaviors, and dietary habits were sent via an online platform. Self-reported weight, and height before and during the pandemic were also collected.

Results: The percentage of those who skip the main meals during the lockdown (48.1%) has increased compared to before the lockdown (43.9%). The most skipped main meal and snack were breakfast and mid-morning, respectively. Among the study population, 48.1% reported that they increased their vegetable-fruit consumption, 38.1% reported increased water intake and 45.6% reported consuming more home-cooked food. The most preferred snacks were fruits-vegetables (62.3%), and nuts (55.6%). Approximately half of the participants (46.0%) reported an increased appetite and 50.6% of the participants stated an increase in body weight during COVID-19. The weight gain of the 51-64 age group (3.73±4.13 kg) was statistically significantly higher than the 18-50 age group (0.43±4.51 kg) (p=0.014). The rate of those who reported doing at least 150 minutes of exercise per week before COVID-19 (43.9%) decreased during the pandemic (30.5%).

Conclusion: Body weight, appetite, some dietary habits, and physical activities were generally adversely affected among healthcare workers during the pandemic. Older groups are most prone to weight gain during the lockdown.

Keywords: Healthcare professionals, nutrition, COVID-19, pandemic.

Öz

Amaç: COVID-19 pandemisi nedeniyle sağlık çalışanlarının iş yükü ve çalışma saatleri artmıştır. Bu araştırmanın amacı, COVID-19 pandemi sürecinin sağlık çalışanlarının beslenme alışkanlıkları üzerine etkisini değerlendirmektir.

Gereç ve Yöntem: Araştırma 18-65 yaş arası 239 yetişkin birey üzerinde yürütülmüştür. Sağlık çalışanlarının sosyo-demografik özellikleri, sağlık bilgileri, yaşam biçimi davranışları ve beslenme alışkanlıklarına ilişkin bilgiler çevrimiçi bir anket formu aracılığıyla toplanmıştır. Pandemi öncesi ve sürecindeki vücut ağırlıkları ve boy uzunlukları bireylerin kendi beyanlarına dayalı olarak sorgulanmıştır.

Bulgular: Pandemi sürecinde ana öğünleri atlayanların oranı (%48,1), pandemi öncesine göre (%43,9) artmıştır. En çok atlanan ana ve ara öğünler sırasıyla kahvaltı ve kuşluk öğünleridir. Pandemi sürecinde bireylerin %48,1'i sebze-meyve, %38,1'i su, %45,6'sı ise ev yemeği tüketimini artırmıştır. Bu süreçte ara öğün olarak en çok meyve-sebze (%62,3) ve kuruyemişler (%55,6) tercih edilmiştir. COVID-19 sürecinde bireylerin yaklaşık yarısının (%46,0) iştahında ve %50,6'sının vücut ağırlığında artış olmuştur. Ayrıca 51-64 yaş grubu bireylerin (3,73±4,13 kg) vücut ağırlık artışı, 18-50 yaş grubuna (0,43±4,51 kg) göre istatistiksel olarak anlamlı derecede yüksektir (p=0,014). COVID-19 pandemi sürecinde haftada en az 150 dakika egzersiz yaptığını bildirenlerin oranı (%30,5) pandemi öncesine (%43,9) göre azalmıştır.

Sonuç: Pandemi sürecinde sağlık çalışanlarının iştah durumları, bazı beslenme alışkanlıkları, vücut ağırlıkları ve fiziksel aktivite durumları genel olarak olumsuz etkilenmiştir. Orta yaş grubu pandemi sürecinde vücut ağırlık artışına daha yatkındır.

Anahtar Kelimeler: Sağlık çalışanları, beslenme, COVID-19, pandemi.

1. Introduction

The coronavirus disease (COVID-19), which started in Wuhan, China in December 2019 and spread all over the world, is a viral disease that is accepted as a pandemic by the World Health Organization (WHO), threatens public health, reduces the quality of life, and changes lifestyle habits (1). While long-term social isolation was applied throughout the public to minimize the spread of the disease, healthcare professionals had to continue their work in hospitals and clinics (2). It has been reported that more than 300,000 healthcare professionals were infected, and more than 7000 healthcare professionals died in the world in this period (3). Healthcare professionals need to protect themselves against the transmission of the disease with masks, personal protective equipment, social distancing, and hand hygiene (4). In addition to these, healthcare professionals who are role models for society should show healthy lifestyle behaviors such as healthy eating, exercising, not smoking, and not using alcohol during COVID-19 (5). Studies conducted with healthcare professionals have focused on the psychosocial impact of COVID-19 (6-9). In a study conducted on healthcare professionals, it was stated that the nutritional status of the professionals was not given much attention (10). WHO pointed out that a well-balanced diet and adequate fluid intake are very vital in this period. Individuals who follow a well-balanced diet tend to be healthier with stronger immune systems and a lower risk of chronic diseases and infectious illnesses. Moreover, WHO recommends eating a variety of fresh and unprocessed foods every day to get dietary fiber, protein, vitamins, minerals, and antioxidants (11).

The workload and working hours of healthcare professionals have increased due to the COVID-19 outbreak and restriction decisions (12,13). As a result, habitual lifestyles, including food consumption, eating behavior, water intake and consumption of stimulants such as caffeine underwent significant changes due to work stressors, affecting the nutritional status and immune response (14). This cross-sectional study aimed to evaluate the understanding of how COVID-19 outbreak restrictions affect dietary habits among healthcare professionals who play the most important role during the pandemic.

2. Materials and Methods

2.1. Study Design and Participants

This self-selection online cross-sectional study was carried out with healthcare professionals between the ages of 18 and 65 living in İzmir, Turkey. Doctors, nurses/midwives, physiotherapists, dietitians, dentists, pharmacists, and other healthcare professionals working in state hospitals, university hospitals, family medicine centers, or private hospitals were included in the study. Other healthcare professionals were included such as speech and language therapists, technicians, medical secretaries, patient caregivers, paramedics, and health officers. A snowball sampling technique was used for this survey. Respondents were recruited via social networks (Facebook, WhatsApp, etc.). Inclusion criteria were: 1) using WhatsApp, 2) residing in İzmir/Turkey, and 3) being 18-65 years. Participants excluded from the study were those 1) who had psychological and eating disorders, and 2) who did not complete the questionnaire appropriately.

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving participants were approved by İzmir Kâtip Çelebi University Clinical Research Ethics Committee (Decision date/no: 24.12.2020/1103) and study permission was obtained from the T.R. Ministry of Health Scientific Research Platform. As the study was web-based, to obtain written consent, 'I agree to participate in the study' tab was added per online questionnaire.

2.2. Data Collection

Data collection was conducted from December 2020 to April 2021 using an online questionnaire created using Google Forms web survey software. The link to the online survey was shared with the members of the Faculty of Health Sciences of Izmir Katip Celebi University via WhatsApp. Healthcare professionals were also asked to share the online survey link with their friends.

The questionnaire form used in this study consists of four parts. The first part included questions about socio-demographic characteristics such as age, gender, marital status, education level, and employment status. The second part consisted of health information such as chronic disease status, smoking, alcohol consumption status, and exercising for at least 150 minutes a week. The third part included questions about dietary habits. The last part included self-reported body weight and height.

2.3. Dietary Habits

The pattern of main meals including skipping meals (breakfast, lunch, dinner) was questioned. Maintaining an adequate and balanced diet based on the statements of the participants was examined.

2.4. Anthropometric Measurements

Body weight (kg), height (cm), and also change in body weight (kg) during the pandemic period information obtained in the questionnaire were all self-reported by the participants. Body mass index (BMI) was calculated by dividing body weight in kilograms by the square of height in meters (15). Participants were classified as underweight (<18.50 kg/m^2), normal weight (18.50-24.99 kg/m^2), overweight (25.00-29.99 kg/m^2), and obese (≥30.00 kg/m^2) according to the cut-off points determined by the WHO (16).

2.5. Statistical Analysis

All statistical analyses were performed using SPSS 20.0 (SPSS Inc., Chicago, IL, USA) statistical package software. Categorical variables were presented as frequencies (n) and percentages (%); continuous variables were presented as means and standard deviations (SD). The normality of the variables was assessed using the Shapiro-Wilk test. The Mann–Whitney U test was used to compare the differences between two independent groups for not normally distributed variables. The differences between the three independent groups for not normally distributed variables were assessed with the Kruskal Wallis-H test. The Wilcoxon test was used to evaluate the differences between the mean BMI of participants for the period before and during the pandemic. To determine differences in dichotomous dependent variables between two dependent groups the McNemar test was used. For all analyses, statistical significance was considered $p<0.05$.

3. Results

The socio-demographic characteristics of the participants are presented in Table 1. The mean age of 239 participants (73.6% female) who completed the study was 32.53±9.20 years. Most of the participants were nurses (37.2%), doctors (24.7%), and dieticians (14.2%).

Table 1. Demographic Characteristics of the Healthcare Professionals (n=239)

Variables	n	%
Age (years)		
18-50	224	93.7
51-64	15	6.3
Gender		
Male	63	26.4
Female	176	73.6
Marital status		
Married	127	53.1
Single	112	46.9
Occupation		
Dietician	34	14.2
Physiotherapist	5	2.1
Nurse	89	37.3
Doctor	59	24.7
Midwife	12	5.0
Dentist	4	1.7
Pharmacist	8	3.3
Other healthcare professionals	28	11.7
Working status		
Before pandemic		
Yes	200	83.7
No	39	16.3
During pandemic		
Yes, I am working from home	11	4.6
Yes, I am working at a hospital, office, etc.	198	82.8
No, I do not work	30	12.6
Living status		
Alone	50	20.9
With family	175	73.2
With housemate/s	14	5.9

n: number of participants, %: percentage

The health information and lifestyle habits of participants are given in Table 2. While more than one-third of the healthcare professionals (74.1%) did not have any chronic disease, 5.9% had "vitamin and mineral deficiencies", 5.0% had "endocrine (hormonal) diseases" and 3.8% had "diabetes mellitus". It was determined that the percentage of smokers during the pandemic period decreased from 31.0% to 29.3% compared to the pre-pandemic period. In addition, it was determined that the percentage of those who did at least 150 minutes of exercise per week (such as jogging) before the lockdown period (43.9%) decreased during the lockdown period (30.5%).

Table 2. Health Information and Lifestyle Behavior of the Healthcare Professionals (n=239)

Variable	n	%
Chronic illness		
Yes	62	25.9
No	177	74.1
Chronic illnesses*		
Diabetes mellitus	9	3.8
Cardiovascular diseases	8	3.3
Endocrine (hormonal) diseases	12	5.0
Hypertension	4	1.7
Cancer	2	0.8
Polycystic ovary syndrome (PCOS)	7	2.9
Mental disorders	4	1.7
Musculoskeletal problems	8	3.3
Vitamin and mineral deficiencies	14	5.9
Digestive system diseases	6	2.5
Kidney diseases	1	0.4
Asthma	3	1.3
Epilepsy	2	0.8
Allergy	2	0.8
Regular drug use		
Yes	52	21.8
No	187	78.2
Smoking status		
Before pandemic		
Yes	74	31.0
No	165	69.0
During pandemic		
Yes	70	29.3
No	169	70.7
Alcohol consumption		
Yes	28	11.7
No	211	88.3
Exercising for at least 150 minutes a week		
Before pandemic		
Yes	105	43.9
No	134	56.1
During pandemic		
Yes	73	30.5
No	166	69.5

Multiple responses were allowed for this question

n: number of participants, %: percentage

The dietary habits of healthcare professionals during the COVID-19 pandemic are shown in Table 3. As well as approximately half of the participants (46.0%) reported an increased appetite during the pandemic, it was also determined that nearly half of them (47.3%) paid attention to portion control during the pandemic. During the pandemic, 45.2% of participants reported that there was no change in food consumption. In addition, 46.4% of health professionals reported that they had a healthy diet during this period.

Table 3. Dietary Habits of the Healthcare Professionals during the Pandemic (n=239)

Variable	n	%
Perception of having an adequate and balanced diet during the pandemic		
Yes	157	65.7
No	82	34.3
Paying attention to portion control during the pandemic		
Yes	113	47.3
No	126	52.7
Appetite status during the pandemic		
Increased	110	46.0
Decreased	22	9.2
Not changed	107	44.8
Change in food consumption during the pandemic		
Increased	104	43.5
Decreased	27	11.3
Not changed	108	45.2
Change in eating time during the pandemic		
Increased	58	24.3
Decreased	35	14.6
Not changed	146	61.1
Please mark the ones that are suitable for you among the changing dietary habits during the pandemic*		
I'm eating irregularly.	58	24.3
I'm consuming more home-cooked food.	109	45.6
I'm eating healthy.	111	46.4
I consume more junk food.	35	14.6
I eat more.	61	25.5
I eat less.	22	9.2
I eat regularly.	-	-
Thinking about continuing the changing dietary habits during the pandemic		
Yes	94	39.3
No	37	15.5
I do not know	108	45.2

*Multiple responses were allowed for this question

n: number of participants, %: percentage

The status of skipping main meals and snacks is shown in Figure 1. The percentage of those who skip the main meals during the lockdown (48.1%) has increased compared to before the lockdown (43.9%), and the percentage of those who skip snacks has decreased (before pandemic: 68.2%; during the pandemic: 66.9%). However, it was determined that participants' skipping main meals and snacks during the pandemic were not statistically significant compared to the before-pandemic period (p= 0.229 and p=0.700, respectively). The most skipped main meals and snacks during the pandemic were determined as breakfast and mid-morning, respectively (Figure 1).

In this period, the most consumed snacks were fruits-vegetables (62.3%), nuts (such as hazelnuts, walnuts, and peanuts) (55.6%), and tea-coffee (54.0%) (Figure 2). Changes in the consumption of some foods during the pandemic are presented in Figure 3. 48.1% of participants increased their vegetable-fruit consumption and 25.9% decreased their packaged product consumption during the pandemic. In this period, the spice consumption of 74.9% of healthcare professionals did not change compared to before the pandemic (Figure 3).

Information on body weight changes during the COVID-19 pandemic is given in Figure 4. The mean BMI of participants during the period (23.60±3.80 kg/m^2) was significantly higher than before the pandemic (23.37±3.67 kg/m^2) (p=0.006). The majority of participants were normal weight before and during the pandemic (66.9% and 71.5%, respectively) (Data not shown in the table). Half of the participants (50.6%) weight increased during the pandemic. It was determined that the maximum weight gain declared during the pandemic period was 13 kg, and the maximum weight loss was -14 kg. There was no statistically significant difference in body weight gain between BMI groups (p=0.546). In addition, the weight gain of the 51-64 age group (3.73±4.13 kg) was significantly higher than the 18-50 age group (0.43±4.51 kg) (p=0.014) (Figure 4).

4. Discussion

The aim of the study was to evaluate changes in dietary habits and lifestyle among healthcare workers during COVID-19. This study has revealed that the COVID-19 pandemic has negatively affected some eating behaviors, appetite, weight status, and physical activity of healthcare workers. On the other hand, it has been shown to have a positive effect on some aspects such as the increase in consumption of water, vegetables and fruits, and home-made meals.

Healthcare professionals take an active role in the diagnosis, treatment, and monitoring stages of COVID-19. They constitute a special group that should be kept apart from other occupational groups because they carry the risk of being infected, contagious, catching a disease, and even dying (17). Many studies have shown that most healthcare professionals experience mental stress, depression, and anxiety during the outbreak of COVID-19, especially those who have worked in seriously affected areas (18,19). In addition to its negative impact on psychology, COVID-19 also has been shown a negative impact on dietary habits (19,20). In a study conducted in Turkey, it was determined that the frequency of having breakfast, lunch, and dinner decreased with the increase in working hours and work intensity of healthcare workers (20). Celerio-Sarda et al. (21) reported that 45.6% of food science students and professionals reported stopping having a mid-morning snack during the lockdown. Consistent with the literature, in this study, the percentage of those who skip the main meals (48.1%) during the lockdown has increased compared to before the lockdown (43.9%). The most skipped main meal and snacks were breakfast and mid-morning, respectively. However, during COVID-19, the status of skipping meals and snacks was not statistically different from before COVID-19 (Figure 1). This finding can be associated with the tendency of the participants to skip meals in the period before COVID-19. Since skipping meals is one of the unhealthy eating habits, this situation can cause unhealthy eating when it becomes a habit. A healthy diet was found to be associated with less perceived stress and anxiety in Portuguese nurses during COVID-19 (22). In this context, it is important to note that adequate and balanced nutrition is important in terms of improving the psychological health of healthcare workers in the working environment and the fight against COVID-19 (14).

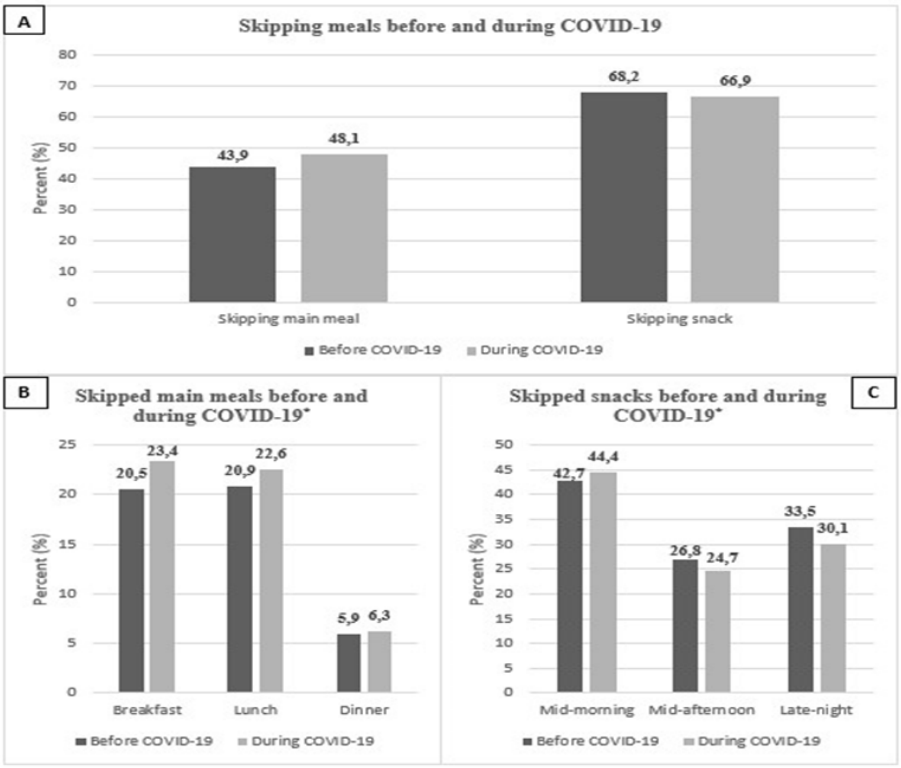

Figure 1. (A) Skipping Meals Before and During the COVID-19 (n=239). (B) Skipped Main Meals Before and During the COVID-19. (C) Skipped Snacks Before and During the COVID-19 (McNemar Test was used for Figure A' analyses) (*Multiple responses were allowed for this question)

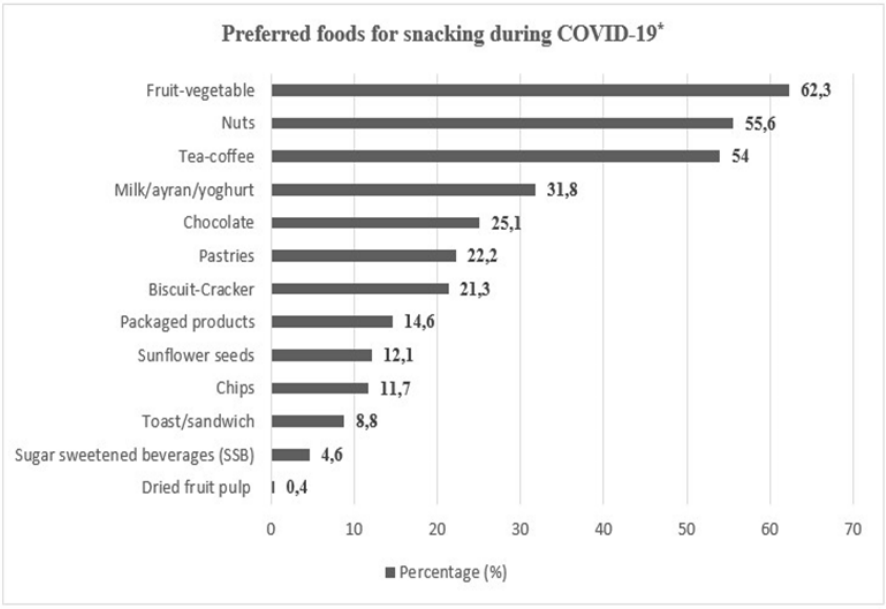

Figure 2. Preferred Foods for Snacking During the COVID-19 (%) (n=239)

(*Multiple responses were allowed for this question)

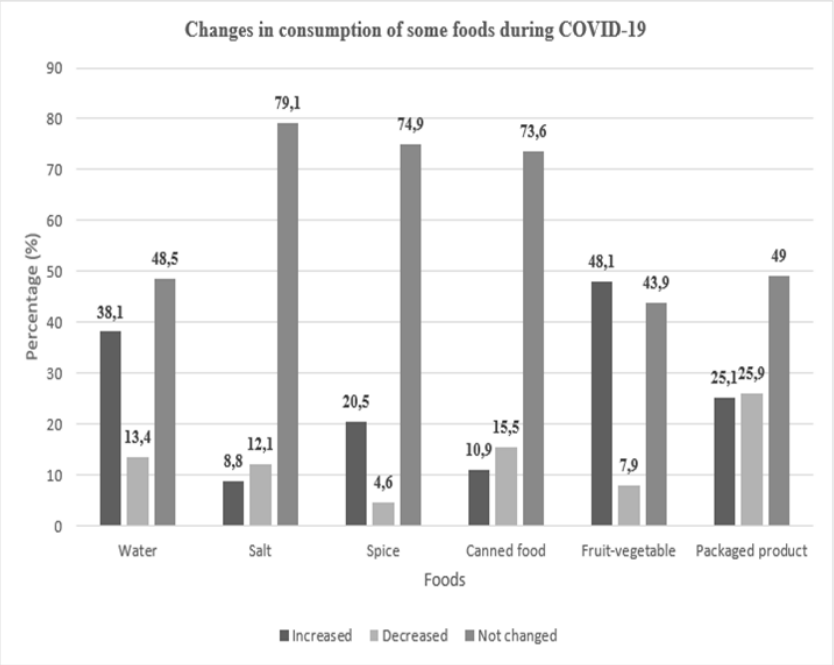

Figure 3. Changes in Consumption of Some Foods During the COVID-19 (%) (n=239)

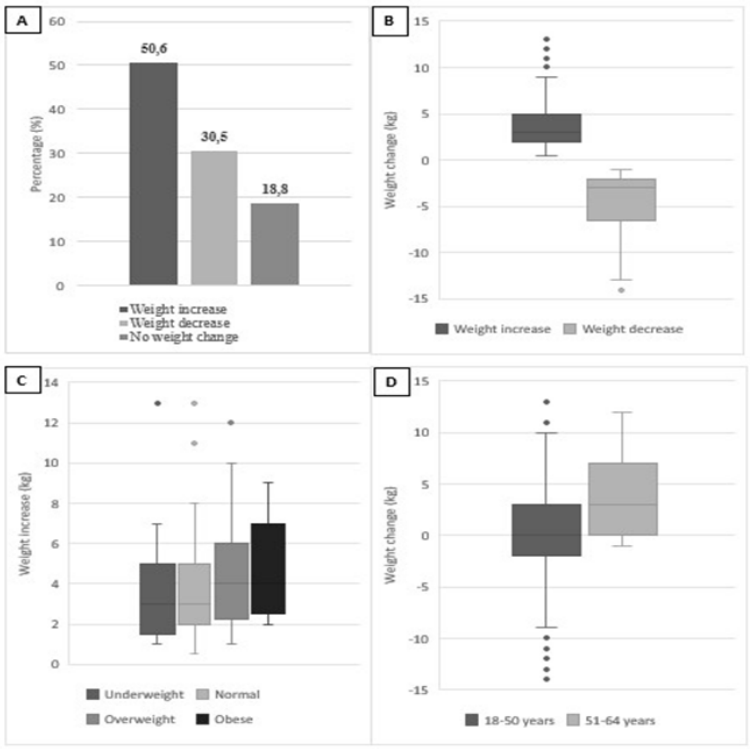

Figure 4. (A) Reported Trends in Weight Change During COVID-19 Pandemic (n=239). (B) Mean ± SD of Experienced Weight Increase or Decrease (Dots Represent Outlier Change Values). C) Weight Increase in Different BMI Groups. (D) Weight Change in the Different Age Group [(C) Kruskal Wallis-H Testi, (D) Mann Whitney U testi, †p<0.05)]

Among the study population, 65.7% declared that they had an adequate and balanced diet during the COVID-19 pandemic, 48.1% reported that they increased their vegetable-fruit consumption, 38.1% reported increased water intake, and 45.6% reported consuming more home-cooked food. Furthermore, participants who had snacks stated that they mostly preferred fruits, vegetables, and nuts (such as hazelnuts, walnuts, and peanuts) for snacks. Consistent with these findings, Oliver et al. (23) showed that 53.7% of nutritionists residing in the United States increased their meal preparation at home. Another study revealed that water, fruit, and vegetable consumption and home cooking practices increased significantly among food science students and professionals in Spain during the lockdown period (21). Doğan et al. (20) determined that Turkish health professionals increased their consumption of vegetables and fruits, and nuts (walnuts, hazelnuts, peanuts, etc.) during the COVID-19 compared to the pre-COVID-19 period. It was also determined in this study that the consumption of vegetables, fruits, nuts, water, and home-made foods increased, and this situation is thought to be related to high nutrition and health literacy. Tran et al. (24) emphasized the positive impact of higher health literacy on a more balanced diet among healthcare workers during the COVID-19 pandemic.

Approximately half of the participants (46.0%) reported an increase in their appetite, and 43.0% reported increasing food consumption during the lockdown. Similarly, in a study investigating the effects of quarantine on nutrition and consumer habits in Poland, 43.5% of participants reported that they ate more during quarantine (25). In a study conducted in Italy, 34.4% of the participants also reported an increase in appetite (26). In a study conducted with medical doctors in the emergency and intensive care units, it was found that some of the doctors had a desire to eat more than usual and that fast food diets increased during the pandemic period (27). Nashwhan et al. (28) found that nurses working at COVID-19 facilities in Qatar had increased odds of having higher emotional eater questionnaire scores than nurses working in non-COVID-19 facilities. This result is attributed to the high workload and high risk of exposure in a COVID-19 facility (28). In the present study, the increase in appetite and food consumption of healthcare workers can be explained by emotional eating which is an eating behavior used to cope with negative emotions (anxiety, stress, etc.). Some of the healthcare workers who participated in the present study might be experiencing certain psychological problems that may lead to increased appetite and food consumption during the COVID-19 pandemic.

Regarding weight management perception, 50.6% of the participants stated an increase in body weight during COVID-19, while 30.0% stated a decrease in their body weight. Similarly, in a survey conducted in China, 26.2% of healthcare workers reported an increase in body weight during the pandemic, and 22.9% reported a decrease in body weight (10). In a study conducted in Turkey, it was found that 42.7% of health workers' body weight increased, 26.8% decreased and 26.8% did not change during the pandemic (29). In Brazil, 32.9% of urologists had weight gain while 19.4% noticed weight loss during the COVID-19 pandemic (30). In this study, it is seen that the rate of participants who stated that there was an increase in body weight was higher than in other studies. This result can be explained by the fact that the data collection process and sample size are different from other studies. Moreover, the fact that the majority of the participants in this study were doctors and nurses who have the potential to experience more stress and anxiety during the pandemic process compared to other populations may explain this result. It has been reported that the higher the perception of stress in healthcare workers, the higher the risk of engaging in behaviors that impair health (31). Additionally, despite the increase in participants' healthy eating tendencies, their increased appetite and number of skipped meals, and decreased level of physical activities are also important risk factors for healthcare workers to gain weight during COVID-19 (32).

Increased weight has been associated with a more severe clinical course of COVID-19 and an increased risk of death (33,34). It is known that age also changes the severity of the disease (35). For this reason, it is necessary for older and obese people to especially adhere to social distancing measures (25,33,35). This study showed an increase in body weight in half of the participants. The study also found that participants aged 51-64 were more prone to weight gain compared to participants aged 18-50. Consistent with this result, in a study conducted on Polish adults, it was shown that older subjects are more prone to body weight gain during the COVID-19 lockdown (25). These results can be attributed to older participants doing less physical activity and skipping the main meal. These data indicate that quarantine potentially magnifies body mass index-related health issues. Furthermore, these results show the requirement for appropriate dietary and behavioral support for older healthcare workers during the lockdown as this group has increased vulnerability to infections and their severity.

The COVID-19 pandemic has dramatically affected lifestyle activities all around the world (36). The WHO recommends being physically active during the isolation period. According to WHO, 150 minutes of moderate-intensity physical activity per week is recommended for adults (37). In a study examining the effects of COVID-19 on the eating habits and physical activities of health professionals in Brazil, 53.9% of the participants reported that they stopped exercising, and 25.8% reported that they reduced the frequency of training (38). An American survey carried out among obese people during social isolation due to the COVID-19 pandemic showed that 47.9% of participants reduced the frequency of physical activity and 55.9% its intensity (39). Brazilian et al. (30) reported that the vast majority (60%) of Brazilian urologists reduced physical activity. In another study, 52.4% of healthcare professionals reported that they reduced their physical activity during the pandemic (29). Consistent with the literature, in this study, it was found that the rate of those who reported doing at least 150 minutes of exercise (such as brisk walking, and jogging) per week before COVID-19 (43.9%) decreased during the pandemic period (30.5%). It is well known that physical inactivity can lead to an increase in the risk of developing cardiovascular diseases, cancer, and diabetes mellitus (40). Moreover, studies have shown that health professionals who do not exercise regularly have a higher burnout level than those who exercise regularly (41,42). Therefore, it is important for healthcare professionals to follow individual exercise programs to increase their physical activity levels during the COVID-19 pandemic.

This study has some limitations. First, the data was collected in a self-reported online questionnaire which could result in the actual misreporting of data. Second, food consumption records could not be obtained to assess dietary habits. Third, participants' body weights were not measured directly before and after quarantine, records by declaration. Therefore, it should be treated as a rough estimate rather than an exact value. Fourth, since the sample of the study consists of healthcare workers residing in İzmir, the findings cannot be generalized. Fifth, the questions about the state of thinking that they have an adequate and balanced diet directed to the participants are based on the statement. Since it is thought that the perceptions of the participants may change over time, the data obtained are limited to the time the research was conducted.

5. Conclusions

The results of this study showed that body weight, appetite, some eating habits, and physical activities were generally adversely affected among healthcare workers during the COVID-19 pandemic. The fact that more than half of the participants stated that they had an adequate and balanced diet and that they increased their consumption of fruits, vegetables and water can be considered as positive behaviors exhibited by individuals during the COVID 19 pandemic. Furthermore, the study demonstrated that overweight and older groups are most prone to weight gain during the lockdown. Altogether, these results suggest that dietary and behavioral intervention policies should be developed to protect the health and improve the diet quality of healthcare workers in public health crises such as pandemics.

6. Contribution to the Field

The findings of this study could provide a framework for understanding how COVID-19 outbreak restrictions affect dietary habits among healthcare professionals who play the most important role during the pandemic.

Ethical Aspect of the Research

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving research study participants were approved by İzmir Kâtip Çelebi University Clinical Research Ethics Committee (Decision date/no: 24.12.2020/1103) and study permission was obtained from the T.R. Ministry of Health Scientific Research Platform. As the study is web-based, in order to obtain written consent, 'I agree to participate in the study' tab was added per online questionnaire.

Conflict of Interest

This article did not receive any financial fund. There is no conflict of interest regarding any person and/or institution.

Authorship Contribution

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Kaynaklar

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