

The Prediction of Conscious Awareness in Women's Physical Activity Level and Healthy Living Habits

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Abstract

Health is not only a state of physical well-being, but also a state of well-being in all aspects, both psychologically and sociologically. It is known that women all over the world lag behind in physical activity level. However, it is not known how much female are aware of this situation. In this respect, it is aimed to reveal the conscious awareness levels of how much women are aware of this situation. A total of 474 female participants from 7 geographical regions throughout Türkiye were included in the research. Personal information form, International Physical Activity Questionnaire-Short Form (IPAQ-SF), and Mindful Awareness Scale (MAS) were used in the research. The data obtained in the research were analyzed in the Jamovi (2.3.21.0) statistical program at a 95% confidence interval and 0.05 significance level. In the analysis of the data, t-test, ANOVA, and Linear Regression analysis were used in independent groups. According to the results of the research, it was determined that the majority of women were married, worked as civil servants, did not consume cigarettes and alcohol, paid attention to healthy nutrition, and used pedometer. It was determined that the majority of woman had a normal body mass index (BMI), their total Metabolic Equivalent (MET) levels were at a good level and their conscious awareness levels were at a moderate level. Total MET scores of females in the Black Sea region were significantly higher than women in the Central Anatolia region ($p < 0.05$). It was concluded that the conscious awareness scores of females did not predict BMI and total MET scores ($p > 0.05$). As a result, it can be said that the healthy living habits of females in Türkiye are at a good level, but this cannot be predicted with the level of conscious awareness.

Keywords: Physical activity, Body mass index, Mindful awareness scale, Woman

Kadınlarda Fiziksel Aktivite Düzeyi ve Sađlıklı Yaşam Alışkanlıklarında Bilinçli Farkındalığın Yordayıcılığı

Öz

Sađlık sadece fiziksel olarak iyi olma hali deđil kiřinin psikolojik, sosyolojik açıdan da tüm yönleriyle iyi olma halidir. Tüm dünya genelinde kadınların fiziksel aktivite düzeyinde geride olduđu bilinmektedir. Fakat kadınların bu durumun ne kadar farkında oldukları bilinmemektedir. Bu bakımdan kadınların bilinçli farkındalık düzeylerinin sađlıklı yaşam alışkanlıklarını yordayıcılıđını ortaya çıkarmak amaçlanmıştır. Arařtırmaya tüm Türkiye geneli 7 cođrafi bölgeden toplamda 474 kadın katılımcı dahil edilmiştir. Arařtırmada kiřisel bilgi formu, Uluslararası Fiziksel Aktivite Anketi-Kısa Form (IPAQ-SF) ve Bilinçli Farkındalık Ölçeđi (BİFÖ) kullanılmıştır. Arařtırmada elde edilen veriler Jamovi (2.3.21.0) istatistik programında %95 güven aralığı ve 0,05 anlamlılık düzeyinde analiz edilmiştir. Verilerin analizinde, bađımsız gruplarda t test, ANOVA ve Lineer Regresyon analizi kullanılmıştır. Arařtırmanın bulgularına göre kadınların çođunluđunun evli olduđu, memur olarak çalıştığı, sigara ve alkol tüketmediđi, sađlıklı beslenmeye dikkat ettiđi ve adımsayar uygulaması kullandıđı belirlenmiştir. Kadınların çođunluđunun normal beden kütle indeksine (BKİ) sahip olduđu, toplam Metabolik Eşdeđer (MET) düzeylerinin iyi seviyede ve bilinçli farkındalık düzeylerinin de orta düzeyde olduđu belirlenmiştir. Karadeniz bölgesindeki kadınların toplam MET puanları, İç Anadolu bölgesindeki kadınlara göre anlamlı derecede daha yüksektir ($p < 0,05$). Kadınların bilinçli farkındalık puanlarının, BKİ ve toplam MET puanlarını yordamadığı sonucuna ulařılmıştır ($p > 0,05$). Sonuç olarak Türkiye'deki kadınların sađlıklı yaşam alışkanlıklarının iyi seviyede olduđu fakat bunun bilinçli farkındalık düzeyi ile öngörülemediđi söylenebilir.

Anahtar kelimeler: Fiziksel aktivite, Beden kütle indeksi, Bilinçli farkındalık, Kadın

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INTRODUCTION

The gradual increase in chronic diseases, which is one of the problems of our age, is one of the public health problems that create health, economic and social burden all over the world. Chronic diseases, especially cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases, cause more than 36 million deaths worldwide every year (General Directorate of Public Health, 2020). In the treatment of chronic diseases, factors such as tobacco and alcohol use, unhealthy diet, and insufficient physical activity, which are behaviorally modifiable risk factors, are emphasized. In its due diligence, the World Health Organization (WHO) announced that 27% of the adults in the world population and more than 80% of individuals under the age of 18 do not meet the physical activity levels recommended by WHO (WHO, 2022). Results based on gender indicate that 23% of men over the age of 18 and 32% of female do not have adequate physical activity levels (WHO, 2016). In addition to the fact that being a woman is seen as a physical activity barrier (Zavala et al., 2022), it is known that there are inequalities between female-male, girls-boys, the old-young, socioeconomically advantaged individuals, and socioeconomically disadvantaged individuals around the world (WHO, 2022).

Studies conducted to determine the level of physical activity based on gender also show that women have lower levels of physical activity than men (Beck et al., 2022; Mielke et al., 2018; Vieira et al., 2022; Zenu et al., 2023). When we look at the distribution of physical activity level in our country by gender, according to the "Chronic Diseases Risk Factors Research 2011" research, it was reported that 77% of males and 87% of female in Türkiye do not do enough physical activity (Women's Sports Foundation, 2016). Studies to determine the level of physical activity in the Turkish sample (Kayantaş et al., 2022; Yüce and Muz, 2021) draw attention to the conclusion that females have lower physical activity levels than males. Cultural and societal factors, social norms, expectations, safety concerns, opportunities, accessibility, as well as females' body image are among the barriers to physical activity (Dédélé et al., 2022; Mann and Hacker, 2022). It is important in promoting physical activity by identifying physical, social, environmental, and personal factors related to women's participation in physical activity (Ainsworth et al., 2003).

Controlled processes such as physical activity are slow and occur within 'conscious awareness' (Maltagliati et al., 2022). Awareness, which is a psychological factor, is defined as an 'a psychological state that allows thoughts, feelings, and behaviors to emerge by adapting to the moment without focusing on the past or future' (Lynn et al., 2022). The concept that advocates 'to pay attention to and realize the benefits of the moment lived in a certain middle direction by avoiding judgments as much as possible' is defined as conscious awareness (mindfulness) (Kabat-Zinn, 2012). In addition to the existence of many different factors in conscious awareness, it is known that the effect of attention and stimuli is one of the most important factors (Aktepe and Tolan, 2020). Physical activity and conscious awareness are complementary elements, and higher awareness of individuals is associated with higher levels of physical activity (Tajima et al., 2022).

In this context, in this reserach, it is aimed to determine the relationship between women's conscious awereness level and healthy living habits.

Based on these objectives, the following hypotheses were determined:

What are the demographic characteristics and healthy living habits of women in Türkiye?

1. What are the BMI, total MET, and MAS values of females in Türkiye?
2. Do females' BMI, total MET, and MAS scores differ in terms of demographic information and healthy living habits?
3. Are females' MAS scores a significant predictor of BMI and total MET scores?

METHOD

Research Model

Relational screening model, one of the general scanning models, was used in the research. The relational screening model is defined as "all the processes that define a past or present situation as it exists and applied for the development of learning or desired behavior" (Bahtiyar and Can, 2017).

Population and Sampling

The research group consists of females over the age of 18 living in 7 geographical regions of Türkiye. While determining the sample number, the formula ($n = \frac{Nt^2pq}{d^2(d-1)+t^2pq}$) was used (n: sample size, N: population size, t: significance level (1,96), p: the probability of occurrence (0.5), q: the probability of not occurrence (0.5), and d: margin of error (0.05)). When the number of females in the Turkish sample (36.189,124) is substituted in the formula, the result shows that 384 participants will be sufficient.

In the research, 473 female participants were reached. The participants' mean was ($M=35.0$, $SD=10.4$), weight was ($M=65.4$, $SD=11.8$), average was ($M=164.2$, $SD=6.5$), and sleep duration was ($M=7.4$, $SD=1.2$). According to the MET classification, 15.8% (n:75) of the participants are inactive, 40.3% (n:191) are active and 43.7% (n:207) are a very active class.

Ethical Approval

This research was conducted by the Scientific Research and Publication Ethics Committee of Karamanoglu Mehmetbey University of the Republic of Türkiye (Date: 24.05.2023, Number: E-75732670-020-130080) after the numbered decision letter has been received, the Helsinki Declaration it was conducted in an appropriate manner.

Data Collection Tools

In the research, a demographic information questionnaire, International Physical Activity Questionnaire-Short Form (IPAQ-SF), and The Mindful Awareness Scale (MAS) were used. The data were collected from the participants via 'Google Form' in the virtual environment.

Personal Information Questionnaire: In the questionnaire created by the researchers, there are questions about the demographic information of the participants, age, height, weight, marital status, chronic disease status, working status and healthy lifestyle habits, sleep duration, smoking consumption, alcohol consumption, nutritional status, sports status, and pedometer using.

International Physical Activity Questionnaire Short Form (IPAQ-SF): A questionnaire was designed by the Austrian researcher Doctor Michael Booth in 1996 to determine the health and physical activity levels of individuals in the community in a valid and reliable way (Booth, 2000). The International Physical Activity Group developed the IPAQ based on this survey. The Turkish validity and reliability of the questionnaire were carried out by Öztürk in 2005 (Öztürk, 2005). IPAQ is used in two ways, short and long. In this research, a short form consisting of 7 questions was used. The 7 questions in the questionnaire were prepared to determine the duration of walking, moderate and high-intensity activities, and sitting times of individuals in daily life, based on days and hours. The answers given to the questionnaire determine the metabolic equivalent (ME-min) amounts of individuals in minutes as physical activity duration (minutes) and frequency (days). After the MET values of individuals, weighted physical activity is calculated as 8.0 MET, moderate physical activity: 4.0 MET, low physical activity: 3.3 MET, and walking: 1.5 MET. According to the MET scores, the physical activity level of the individuals is divided into groups as inactive (<600 MET min/week), minimum active (>600-3000 MET min/week), and always active (>3000 MET min/week) (Sağlam et al. ., 2010).

The Mindful Awareness Scale (MAS): The scale was developed by Brown and Ryan to evaluate awareness and focus on momentary experiences in daily life (Brown & Ryan, 2003). The scale is a one-dimensional scale consisting of 15 questions in a 6-point Likert type (always (6), often (5), sometimes (4), rarely (3), seldom (2), almost never (1)). The scale is evaluated over the total score, and the highest score that can be obtained from the scale is 90, and the minimum score is 15. As the scores obtained from the scale increase, the level of mindfulness also increases. The Turkish validity and reliability research of the scale was conducted in 2011 on university students (Özyeşil et al., 2011). After the validity and reliability research of the scale, Cronbach alpha coefficient was determined as 0.80. In this research, the Cronbach's alpha coefficient of the scale was determined as 0.86. The scale has been used in many studies with different participant groups (Güler and Usluca, 2021; İmroğlu et al., 2021; Özyıldırım, 2021; Söner and Kartol, 2022). Confirmatory factor analysis (CFA) was performed to test the construct validity of the scale in this research. According to the CFA results, the fact that the Root Mean Square Error of Approximation (RMSEA) value (0.038) is less than 3 means a perfect fit (Kline, 2011). According to the results of the analysis, it was determined that the scale had a single-factor structure and the standard regression coefficients ranged between 0.39 and 0.77. In this case, none of the 15 items in the scale were discarded and all of them were used in the analysis.

Data Analysis

By looking at the skewness and kurtosis values, it was decided whether the data had a normal distribution or not.

Table 1. Results of normality analysis of the data

	BMI	Total MET	Mindful Awareness Scale
Skewness	0.74	1.13	-0.01
Kurtosis	0.69	0.94	-0.07

When Table 1 was examined, it was decided that the data were between (-1.5, +1.5) and were within the normal distribution limits (Tabachnick & Fidell, 1996). Frequency (N), percentage (%), mean (\bar{X}), and standard deviation (SD) were used in the descriptive analysis of the data.

In the research, t-test and ANOVA test analysis were used in independent groups. Linear Regression analysis was used in the predictive analysis. All analysis were performed at the 0.05 significance level and 95% confidence interval in the Jamovi (2.3.21.0) statistical program.

RESULTS

The following results were reached in this research, which investigated the factors related to the mediating role of conscious awareness in women's physical activity level. Demographic information of the participants is presented below (Table 2).

Table 2. Demographic characteristics of the participants

Variables	Group	N	%
Marital Satus	Married	290	61.3
	Single	183	38.7
Professional Status	Officer	237	50.1
	Self-Employed	54	11.4
	Housewife	182	38.5
Smoking Status	Yes	147	31.1
	No	326	68.9
Alcohol Use Status	Yes	109	23.0
	No	364	77.0
Chronic Disease Status	Yes	69	14.6
	No	404	85.4
Healthy Eating Status	Yes	334	70.6
	No	139	29.4
Using Pedometer	Yes	265	56.0
	No	208	44.0

When Table 2 is examined, it is seen that the majority of the participants are married (61.3%), the majority of them work as civil servants (50.1%), the majority of them do not smoke (68.9%), and do not use alcohol (77%). It is seen that the majority of the participants do not have a chronic disease (85.4%), pay attention to a healthy diet (70.6%), and most of them use pedometers (56%). Participation rates according to the regions of the participants are presented below (Figure 1).

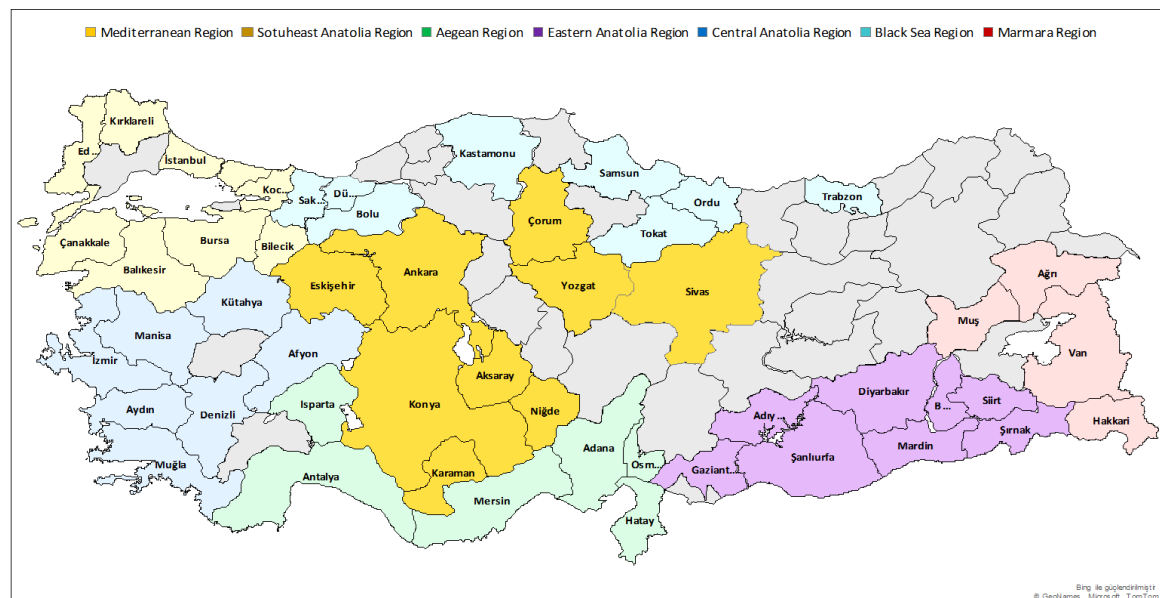


Figure 1. Provinces where the participants live

When Figure 1 is examined, the ranking of the regions where the participants live according to the map of Türkiye; Central Anatolia (45.9%), Marmara (23.3%), Aegean (8.5%), Mediterranean (8.0%), Black Sea (6.7%), South East Anatolia (6.5%) and Eastern Anatolia (1.1%) region. The average scores of the participants' BMI, total MET, and MAS are presented below (Table 3). Female participants from all regions participated in the research, only participants from gray-colored provinces could not be reached. The mean analysis of the participants according to BMI, total MET and MAS are presented below (Table 3).

Table 3. Participants' BMI, total MET and MAS mean

Variables	N	\bar{X}	SD
Body Mass Index (kg/m ²)	473	24.1	4.0
Total MET (minute)	473	1615.6	1016.2
Mindful Awareness Scale (Point)	473	59.4	59
Mindul Awareness Scale (Item)	473	3.74	0.81

When Table 3 is examined, the average BMI score of the participants ($M=24.2$, $SD=4.2$) is in the normal weight class, the total MET average ($M=1650.2$, $SD=1168.9$) is in the very active group, and the conscious awareness scale mean score is ($M=56.2$, $SD=12.1$). The analysis of the participants according to BMI, total MET and MAS, and independent variables is presented below (Table 4).

Table 4. Participants' BMI, total MET, and MAS t-test results

	Variables	Group	N	$\bar{X} \pm SD$	t	p	Cohen's d	Dif.
BMI	Marital Status	1.Married	290	25.3± 3.9	8.2	<.000***	0.78	1 > 2
		2.Single	183	22.4±3.3				
	Alcohol Use Status	1.Yes	109	22.6±3.1	-4.8	<.000***	0.53	2 > 1
		2.No	364	24.6±4.1				
	Chronic Disease	1.Yes	69	25.6±3.9	3.3	.001**	0.43	1 > 2
2.No		404	23.9±3.9					
Healthy Eating	1.Yes	334	23.8±3.6	-3.3	.001**	0.33	2 > 1	
	2.No	139	25.1±4.7					
Total MET	Marital Status	1.Married	290	1448.3± 925.5	-4.6	<.000***	0.43	2 > 1
		2.Single	183	1880.7±1096.7				
	Alcohol Use Status	1.Yes	109	1855.4±1079.9	2.8	<.000***	0.31	1 > 2
		2.No	364	1543.8±986.6				
Using Pedometer	1.Yes	265	1798.1±1021.4	4.5	<.000***	0.42	1 > 2	
	2.No	208	1382.9±962.9					
MAS	Smoking Status	1.Yes	147	57.3±11.9	-3.1	.002**	0.30	2 > 1
		2.No	326	53.6±12.0				
	Alcohol Use Status	1.Yes	109	51.8±10.4	-4.4	<.000***	0.48	2 > 1
		2.No	364	57.5±12.3				
Healthy Eating	1.Yes	334	57.2±11.7	2.9	.004**	0.29	1 > 2	
	2.No	139	53.6±12.8					

p<0.01, *p<0.001, Dif: difference

According to Table 4, the mean BMI of the participants who were married, consumed alcohol, had a chronic disease, and did not pay attention to a healthy diet was significantly higher ($p<0.05$). The total MET averages of the participants who were single, consuming alcohol, and using pedometer were significantly higher ($p<0.05$). The mean of conscious awareness of the participants who do not consume cigarettes and alcohol and those who pay attention to a healthy diet is significantly higher ($p<0.05$). The analysis of the participants' BMI and total MET scores according to the region and occupational groups they live in is presented below (Table 5).

Table 5. ANOVA results of the participants' BMI, total MET, and MAS scores

Regions	Sum of Squares	df	Mean of Squares	F	p
BMI	232.41	6	38.735	2.5	.02
	7207.59	466	15.467		
Total MET	1.90	6	3.16	3.14	.005**
	4.69	466	1.00		
MAS	902.4	6	150.4	1.03	.4
	68166.6	466	146.28		
Profession					
BMI	12.61	2	6.30	0.40	.67
	7427.4	470	15.80		
Total MET	131670	2	65835	0.06	.94
	4.8732	470	1.0368		
MAS	47.733	2	23.866	0.16	.85
	69021.307	470	146.854		

** $p < 0.01$, *df*: degrees of freedom

When Table 5 is examined, there is a statistically significant difference in total MET scores by regions ($F_{6,466}=3.14$, $p < 0.01$). There was no significant difference in the BMI and MAS scores of the participants according to the regions and occupational groups ($p > 0.05$). Post hoc results of total MET scores by region are presented below (Table 6).

Table 6. Post hoc results of total MET scores by region

Regions	N	Total MET $\bar{X} \pm SD$	df	Mean Difference	t	p	Difference (Tukey)
1. Central Anatolia Region	217	1432.5±943.1	466	-625.1	-3.3	.02*	3>1
2. Marmara Region	110	1673.4±968.9					
3. Black Sea Region	32	2057.6±1137.2					
4. Mediterranean Region	38	1831.4±1190.6					
5. Aegean Region	40	1871.1±1127.8					
6. Southeast Anatolia Region	31	1583.7±974.9					
7. Eastern Anatolia Region	5	1974.6±919.4					

* $p < 0.5$, *df*: degree of freedom

When Table 6 is examined, there is a significant difference between the Central Anatolia and Black Sea regions according to the post hoc results of the total MET scores ($p < 0.05$). Accordingly, the total MET averages of the participants living in the Black Sea region were significantly higher than the participants living in the Central Anatolia region ($t = -3.3$, $p < 0.05$). The predictive analysis of the participants' BMI and total MET scores, as well as their MAS scores, are presented below (Table 7).

Table 7. Results of linear regression analysis with BMI and total MET scores of the participants

Model 1	Estimate	Standard Error	Confidence Interval	t	p
BMI	25.404049	0.866593	23.70 – 27.11	29.31	<.000***
MAS	-0.022429	0.015088	-0.05 – 0.01	-1.49	.14
Model 2					
Total MET	1447.4438	222.1951	1010.83 – 1884.1	6.51	<.000***
MAS	2.9942	3.8685	-4.61 – 0.77	0.77	.44
<i>Model 1: $R^2 = 0.01$, $F = 2.21$, $p = 0.14$</i>			<i>Model 2: $R^2 = 0.01$, $F = 0.60$, $p = 0.44$</i>		

When Table 7 is examined, the regression models (Model 1: $F=2.21$, $p=0.14$), (Model 2: $F=0.60$, $p=0.44$) were not statistically significant ($p>0.05$). According to this result, conscious awareness scores do not predict BMI and total MET scores.

DISCUSSION

In this research, the predictor of healthy living habits of females' conscious awareness level was investigated. For this purpose, the differences and predictors between females' physical activity level, body mass index and conscious awareness level, and healthy living habits were analyzed. As a result of the research, it was determined that the majority of females living in 7 different regions in Türkiye were married, worked as civil servants, and did not use cigarettes or alcohol. In addition, it was determined that the majority of females did not have a chronic disease, they paid attention to healthy nutrition, and the majority of them used pedometers.

It is known that housewives have more free time and working women's have less free time, so they have less healthy lifestyles (Kırtepe, 2015). In a research conducted in Türkiye, it was determined that the majority of females who come to the public education center are housewives and do not consume alcohol or cigarettes (Önemli, 2020). In another research, it was determined that the amount of the cigarette consumption among women in Aydın province was 19.2% (Köksal, 2021). In a research conducted in Adıyaman, it was determined that the majority of females were married and housewives, the majority of them did not consume cigarettes and alcohol, and the majority of them did not have a chronic disease (Şahin, 2018). In this research, although the number of housewives is less, it can be said that the majority of females in the sample generally do not consume cigarettes and alcohol, pay attention to healthy nutrition and use pedometers, which means that they pay attention to healthy living habits.

In addition to this result, the average BMI of the participants in this research who are married ($MD=25.3$, $SD=3.9$), who consume alcohol ($MD=22.4$, $SD=3.3$), who have chronic diseases ($MD=25.6$, $SD=3.9$), and who do not pay attention to a healthy diet ($MD=23.8$, $SD=3.6$) is higher. Among the physical activity barriers, the health status of individuals has an important place (Uçar, 2019). In a research investigating the causes of physical activity barriers in individuals with chronic diseases, it was found that 'feeling tired' and 'time constraints' had the highest rates (Souza et al., 2022). In this research, it is an expected result that females with chronic diseases have lower total MET levels ($MD=1493.5$, $SD=943.6$) and higher BMI ($MD=25.6$, $SD=3.9$) values. Another result is that the total MET averages of single females, those who consume alcohol, and those who use pedometers are significantly higher. As a result of a research that included 327,789 participants from 104 countries around the world, it was determined that the occupational and domestic activities of daily life were associated with the amount of moderate and vigorous physical activity, while it was seen that the least relationship was recreational sports areas (Strain et al., 2020). This result assumes that females who are working or housewives do not differ in achieving moderate and vigorous physical activity levels. However, studies on marital status in Türkiye contain different results. According to the results of a research conducted in the sample of Türkiye, the marital status of females does not constitute an obstacle to their physical activity levels (Önemli, 2020). A research has shown that single females have a higher frequency of physical activity compared to married ones (Şahin, 2018). In a recent research, it was seen that single females have more free time than

married females and they adopt more quality-of-life behaviors related to them in this period (Safi, 2023). In a qualitative research, 'lack of time' emerged as the biggest physical activity barrier in desk-bound individuals (Safi et al., 2022). In this research, it can be thought that the single females have lower BMI and higher total MET levels, even if they are working, they allocate their free time outside of work to healthy living habits.

The average conscious awareness of the participants who do not consume cigarettes and alcohol and those who pay attention to a healthy diet is significantly higher. Today, the number of applied clinical studies in developing conscious awareness in females is increasing (Bilgiç and Gürkan, 2021). In an experimental research using online exercises, it was found that the level of conscious awareness of females increased significantly (Özyıldırım, 2021). However, in this research, the current conscious awareness was determined. As expected, it was concluded that those who adopted healthy living habits had a higher level of conscious awareness. This result may have been effective in that more than half of the females in the sample group worked as civil servants in the public sector; because this result means that the education level of females is at least an associate degree and undergraduate graduation. It is known that, as the education level of females increases, they pay attention to healthy nutrition, and their participation in physical activity increases (Bülbül, 2014). In a research conducted with women working in the public sector, it was seen that females were within the normal BMI limits and the probability of healthy lifestyle behaviors increased as the education level of women increased (Ceviz, 2008). In studies conducted in the public sector, it was determined that the conscious awareness scores of female university staff ($M=61.65$, $SD=10.55$) and nurses ($M=63.98$, $SD=12.41$) were at moderate levels (Aşık and Albayrak, 2021; Atalay, 2020). These results show similarities with the conscious awareness score averages of the women in this research. In addition, almost everyone today has smartphones and applications that increase the level of physical activity on these phones (Atalay et al., 2022), and the majority of females in this research sample also use pedometer applications. It can be thought that the pedometer application may also have an indirect effect on the level of conscious awareness, but studies in this area are needed to make definite conclusions about it.

Another result of the research is that there is a statistically significant difference in total MET scores according to the regions. Accordingly, the total MET averages of the participants living in the Black Sea region are significantly higher than the participants living in the Central Anatolia region. In the framework of the 'Global Action Plan for the Prevention and Control of Non-Communicable Diseases 2013-2020' by the World Health Organization, the target of a 10% reduction in the prevalence of insufficient physical activity is included (WHO, 2013). In Türkiye, on the other hand, in the 11th Development Plan, there are articles on measures to raise public awareness and awareness of the society 'education, public service advertisements, campaigns for healthy lifestyles, healthy eating, and active living habits' and 'improving health literacy among women (11th Development Plan, 2019). In a research conducted on 4205 adults in 34 provinces in 7 different geographical regions in Türkiye, it was seen that 56% of the population was in the obese class. According to the regions, the obesity prevalence of females in the Aegean and Marmara regions was lower than the females in Central Anatolia, Southeast Anatolia, and Black Sea regions, and the prevalence of obesity decreased as the education level of females increased (İşeri and Arslan, 2009). In this research, the region with the highest BMI values of females in 46 provinces living in all geographical regions was the Central Anatolia

region, but a significant difference was found only in the Black Sea region. More studies are needed in this area to explain the reasons for this result because it has been observed that the number of studies that included geographical regions as much as the majority of province-based studies in the literature is limited.

The final result of the research is that conscious awareness scores do not predict BMI and total MET scores. Understanding the psychological factors that support or hinder the increase in physical activity level of females is important in increasing physical activity (Lynn et al., 2022). It can be said that conscious awareness includes mental and psychological processes that affect daily life and affects people's behavior (Zümbül, 2021). In a research conducted on females in Gümüşhane, a difference was found between the increase in females' recreation awareness and BMI values (Bebek, 2020). In a research conducted throughout Türkiye, a total of 401 individuals living in 7 different geographical regions reported that even if they had information about the ingredients of foods, they did not take this into account and considered unconscious fast food consumption as an obstacle in the prevention of obesity (Gökşen and Kümüşler, 2020). As with this result, there are situations that individuals prefer even though they are aware of it. One of them may be conscious awareness. It was found that the moderate level of conscious awareness of the women in this research sample did not predict the physical activity level and BMI values. Studies in the literature are mostly focused on conscious awareness and stress, anxiety, psychological resilience, mental well-being, etc. It is intended for psychological research and experimental applications. It can be said that this research can contribute to future studies in terms of being a predictor of the current level of conscious awareness, current physical activity, and BMI values.

CONCLUSION

As a result, it can be said that the physical activity levels and healthy living habits of females living in different provinces in Türkiye are at a good level. It can be said that females' conscious awareness levels do not predict physical activity and BMI values.

Limitations of Research

The research has some limitations. The first of these is that although the provinces representing each geographical region were reached in the research, more participants were included in the research, especially from the Central Anatolia and Marmara regions. Another limitation is that the data used in the research were obtained through questionnaires and scales. Although the data collection tools used in the research were the most frequently used scale and questionnaire in the literature, different results could have been obtained through physical measurements.

Suggestions

- It can be recommended to include studies that are practical and cover all geographical regions in future studies.
- It can be recommended that randomized and controlled experimental studies should be carried out by including all provinces in all geographical regions in future studies.
- The research can also be carried out in different groups, for example, the elderly, people with disabilities and those with chronic diseases.

Conflicts of Interest: There is no financial and personal conflict of interest within the scope of the research.

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Ethical Approval

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REFERENCES

- Aktepe, İ., & Tolan, Ö. (2020). Bilinçli farkındalık: Güncel bir gözden geçirme. *Psikiyatride Güncel Yaklaşımlar*, 12(4), 534-561. <https://doi.org/10.18863/pgy.692250>
- Aşık, E., & Albayrak, S. (2021). Bir üniversite hastanesinde çalışan hemşirelerin bilinçli farkındalık düzeylerinin belirlenmesi. *Düzce Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi*, 11(1), 16-20. <https://doi.org/10.33631/duzcesbed.718133>
- Atalay, E. S., Uyaroğlu, M. B., Koyutürk, G., & Akçay, S. (2022). Mobil teknolojilerin sağlıkta kullanımı. *Bandırma Onyediy Eylül Üniversitesi Sağlık Bilimleri ve Araştırmaları Dergisi*, 4(1), 67-75. <https://doi.org/10.46413/boneyusbad.1025203>
- Atalay, M. (2020). *Mersin üniversitesi çalışanlarında bilinçli farkındalık ve psikolojik dayanıklılık ilişkisi*. Yayımlanmış Yüksek Lisans tezi, Mersin Üniversitesi, Sosyal Bilimler Enstitüsü, Psikoloji Ana Bilim Dalı, Mersin.
- Bahtiyar, A., & Can, B. (2017). Fen öğretmen adaylarının bilimsel süreç becerileri ile bilimsel araştırmaya yönelik tutumlarının incelenmesi. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, (42), 47-58.
- Bebek, S. (2020). *Kadınların bedeni beğenme tutumları, rekreasyon farkındalık düzeyleri ve arasındaki ilişkinin incelenmesi*. Yayımlanmış Yüksek Lisans tezi, Erzincan Binali Yıldırım Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Erzincan.
- Beck, A. M., Serrano, N. H., Toler, A., & Brownson, R. C. (2022). Multilevel correlates of domain-specific physical activity among rural adults - a cross-sectional study. *BMC Public Health*, 22(1), 1-8. <https://doi.org/10.1186/s12889-022-14634-3>
- Bilgiç, G., & Gürkan, O.C. (2021). Kadın sağlığında mindfulness (bilinçli farkındalık) ve kullanım alanları. *İstanbul Gelişim Üniversitesi Sağlık Bilimleri Dergisi*, (14), 363-375. <https://doi.org/10.38079/igusabder.760381>
- Booth, M. (2000). Assessment of physical activity: An International perspective. *Research Quarterly for Exercise and Sport*, 71(2), 114-120. <https://doi.org/10.1080/02701367.2000.11082794>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822-848. <https://doi.org/10.1037/0022-3514.84.4.822>
- Bülbül, H. (2014). *Kayseri'de spor yapan kadınların beslenme alışkanlıkları ve fiziksel aktivite durumlarının saptanması*. Yayımlanmış Yüksek Lisans tezi, Erciyes Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Kayseri.
- Ceviz, D. (2008). *Kamuda çalışan erkek ve kadınların fiziksel uygunluk, beslenme ve spor alışkanlıklarının değerlendirilmesi (Elazığ ili örneği)*. Yayımlanmış Yüksek Lisans tezi, Fırat Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Van.
- Dedelé, A., Chebotarova, Y., & Miškinyté, A. (2022). Motivations and barriers towards optimal physical activity level: A community-based assessment of 28 EU countries. *Prevention Medicine*, 164, e107336. <https://doi.org/10.1016/j.ypmed.2022.107336>
- Gökşen, M., & Kümüşler, A.S. (2020). 19 Yaş üstü bireylerde besin etiketi okuma bilgi düzeyi ile davranışa geçirme arasındaki ilişkinin yaş, kronik hastalık olma durumu ve coğrafi bölgeye göre değerlendirilmesi. *4. Uluslararası Beslenme Obezite ve Toplum Sağlığı Kongresi bildiri kitabı içinde*, 24-25 Aralık, İstanbul.

Güler, K., & Usluca, M. (2021). Yetişkin bireylerde bilinçli farkındalık ile yaşam doyumu arasındaki ilişkinin incelenmesi. *Uluslararası Anadolu Sosyal Bilimler Dergisi*, 5(1), 372-383. <https://doi.org/10.47525/ulasbid.868875>

Halk Sağlığı Genel Müdürlüğü. (2020, 3 Ocak). Bulaşıcı olmayan hastalıkların önlenmesine ve kontrolüne ilişkin küresel eylem planı 2013-2020. Erişim adresi: https://hsgm.saglik.gov.tr/depo/birimler/kanser-db/yayinlar/Kitaplar/KuRESEL_EYLEM_PLANI_-_2013-2020.pdf

İmiroğlu, A., Demir, R., & Murat, M. (2021). Psikolojik iyi oluşun yordayıcıları olarak bilişsel esneklik, bilinçli farkındalık ve umut. *Elektronik Sosyal Bilimler Dergisi*, 20(80), 2037-2057. <https://doi.org/10.17755/esosder.859555>

İşeri, A., & Arslan, N. (2009). Obesity in adults in Turkey: Age and regional effects. *European Journal of Public Health*, 19(1), 91-94. <https://doi.org/10.1093/eurpub/ckn107>

Kabat-Zinn, J. (2012). *Mindfulness for beginners: Reclaiming the present moment and your life*. Boulder, Sounds True.

Kayantaş, İ., Özdemir, M., & Buyrukoğlu, E. (2022). Fiziksel aktivite düzeyinin cinsiyet özelliği açısından incelenmesi (bir meta-analiz çalışması). *Akdeniz Spor Bilimleri Dergisi*, 5(Özel Sayı 1), 687-696. <https://doi.org/10.38021/asbid.1207249>

Kırtepe, A. (2015). *Yerel yönetimlerde rekreatif etkinliklere düzenli olarak katılan ve katılmayan kadınların sağlıklı yaşam biçimi davranışlarının karşılaştırılması (Ankara Büyükşehir Belediyesi örneği)*. Yayınlanmış Doktora tezi, Gazi Üniversitesi Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Ankara.

Kline, R. B. (2011). *Principles and practise of structural equating modeling*. The Guilford Press.

Köksal, Y. (2021). *Aydın ilinde yaşayan kadınlarda tütün kullanımı sıklığı, davranışı ve ilişkili faktörler: Kantitatif ve kalitatif bir çalışma*. Yayınlanmış Tıpta Uzmanlık tezi, Aydın Adnan Menderes Üniversitesi, Tıp Fakültesi, Halk Sağlığı Ana Bilim Dalı, Aydın.

Lynn, S., Satyal, M.K., Smith, A.J., Tasnim, N., Gyamfi, D., English, D.F., Suzuki, W.A., & Basso, J.C. (2022). Dispositional mindfulness and its relationship to exercise motivation and experience. *Frontiers in Sports Active Living*, 4, Article e934657. <https://doi.org/10.3389/fspor.2022.934657>

Maltagliati, S., Sarrazin, P., Isoard-Gauthier, S., Rhodes, R.E., Boisgontier, M.P., & Cheval, B. (2022). I sit but i don't know why: Investigating the multiple precursors of leisure-time sedentary behaviors. *Research Quarterly for Exercise Sport*, 93(3), 548-563. <https://doi.org/10.1080/02701367.2021.1877246>

Mann, M.E., & Hacker, C.M. (2022). Triple jeopardy: The impact of race, class, and gender on girls and women in sport and physical activity. *Psychological Services*. <https://doi.org/10.1037/ser0000676>

Mielke, G.I., da Silva, I.C.M., Kolbe-Alexander, T.L., & Brown, W.J. (2018). Shifting the physical inactivity curve worldwide by closing the gender gap. *Sports Medicine*, 48(2), 481-489. <https://doi.org/10.1007/s40279-017-0754-7>

On Birinci Kalkınma Planını 2019-2023. (2019). 100. Yıl Türkiye planı. Erişim tarihi: 24.05.2023, Erişim adresi: https://www.sbb.gov.tr/wp-content/uploads/2022/07/On_Birinci_Kalkinma_Plani-2019-2023.pdf

Önemli, E. (2020). *Bir halk eğitim merkezindeki kadın kursiyerlerin fiziksel aktivite düzeyleri fiziksel aktiviteye ilişkin görüşleri ve egzersiz davranışı değişim aşamalarının belirlenmesi*. Yayınlanmış Yüksek Lisans tezi, Üsküdar Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Ana Bilim Dalı, İstanbul.

- Öztürk, F.M. (2005). *Üniversitede eğitim-öğretim gören öğrencilerde uluslararası fiziksel aktivite anketinin geçerliliği ve güvenilirliği ve fiziksel aktivite düzeylerinin belirlenmesi*. Yayımlanmış Yüksek Lisans tezi, Hacettepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Fizik Tedavi ve Rehabilitasyon Programı, Ankara.
- Özyeşil, Z., Arslan, C., Kesici, Ş., & Deniz, M.E. (2011). Bilinçli farkındalık ölçeğini Türkçe'ye uyarlama çalışması. *Eğitim ve Bilim*, (36), 224-235.
- Özyıldırım, M. (2021). *Çevrimiçi egzersizlerin yetişkin kadınların bilinçli farkındalık, mental iyi oluş ve beden imajı üzerine etkisi*. Yayımlanmış Yüksek Lisans tezi, Sakarya Uygulamalı Bilimler Üniversitesi, Lisansüstü Eğitim Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Sakarya.
- Safi, A., Cole, M., Kelly, A.L., Zariwala, M.G., & Walker, N.C. (2022). Workplace physical activity barriers and facilitators: A qualitative study based on employees physical activity levels. *International Journal of Environmental Research and Public Health*, 19(15), Article e9442. <https://doi.org/10.3390/ijerph19159442>
- Sağlam, M., Arıkan, H., Savcı, S., İnal-İnce, D., Boşnak-Güçlü, M., Karabulut, E., & Tokgozoglu, L. (2010). International physical activity questionnaire: reliability and validity of the Turkish version. *Perceptual and Motor Skills*, 111(1), 278-284. <https://doi.org/10.2466/06.08.PMS.111.4.278-2>
- Souza, A.L.K., Santos, L.P.D., Rech, C.R., Rodriguez-Añez, C.R., Alberico, C., Borges, L.J., & Fermino, R.C. (2022). Barriers to physical activity among adults in primary healthcare units in the National Health System: A Cross-sectional study in Brazil. *Sao Paulo Medical Journal*, 140(5), 658-667. <https://doi.org/10.1590/1516-3180.2021.0757.R1.20122021>
- Söner, O., & Kartol, A. (2022). Covid-19 salgınına yakalanmayan yetişkinlerin bilinçli farkındalık, depresyon, anksiyete ve stres düzeyleri arasındaki ilişkiler. *Elektronik Sosyal Bilimler Dergisi*, 21(84), 1811-1825. <https://doi.org/10.17755/esosder.1120296>
- Strain, T., Wijndaele, K., Garcia, L., Cowan, M., Guthold, R., Brage, S., & Bull, F.C. (2020). Levels of domain-specific physical activity at work, in the household, for travel and for leisure among 327 789 adults from 104 countries. *British Journal of Sports Medicine*, 54(24), 1488-1497. <https://doi.org/10.1136/bjsports-2020-102601>
- Şahin, T. (2018). *Adıyaman il merkezinde 15-49 yaş kadınlarda obezite sıklığı, fiziksel aktivite düzeyi ve sağlıklı yaşam biçimi davranışları*. Yayımlanmış Doktora tezi, Erciyes Üniversitesi, Sağlık Bilimleri Enstitüsü, Halk Sağlığı Ana Bilim Dalı, Kayseri.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics (3rd ed.)*. HarperCollins College Publishers.
- Tajima, T., Harada, K., Oguma, Y., & Sawada, S.S. (2022). Current status of awareness, knowledge, beliefs, and behavioral intentions regarding the Japanese physical activity guidelines and their relationship with physical activity and sedentary behavior. *Nihon Koshu Eisei Zasshi*, 69(10), 790-804. <https://doi.org/10.11236/jph.21-150>
- Uçar, D.E. (2019). *Engelli bireylerin fiziksel aktiviteye katılımında algıladıkları kısıtlayıcıların incelenmesi*. Yayımlanmış Yüksek Lisans tezi, Anadolu Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Eskişehir.
- Vieira, W.O., Ostolin, T.L.V.D.P., Simões, M.D.S.M.P., Proença, N.L., & Dourado, V.Z. (2022). Profile of adults users of smartphone applications for monitoring the level of physical activity and associated factors: A cross-sectional study. *Frontiers in Public Health*, 10, Article e966470. <https://doi.org/10.3389/fpubh.2022.966470>

- Women's Sports Foundation, (2016). Women's sports foundation report summary, 2016. (Access date: 12.04.2023). Access address: https://www.womenssportsfoundation.org/wp-content/uploads/2016/08/herlife- depends-on-it-3_womens-health.pdf
- World Health Organization, (2013). (WHO) Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Access date: 12.05.2023, Access address: https://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf?ua=1
- World Health Organization, (2016). Prevalence of insufficient physical activity, 2016. (Access date: 10.04.2023). Access address: https://www.who.int/gho/ncd/risk_factors/physical_activity/en/
- World Health Organization, (2022). Global status report on physical activity, 2022. (Access date: 14.04.2023), Access address: <https://www.who.int/teams/health-promotion/physical-activity/global-status-report-on-physical-activity-2022>
- Yüce, G. E., & Muz, G. (2021). COVID-19 pandemisinin yetişkinlerin diyet davranışları, fiziksel aktivite ve stres düzeyleri üzerine etkisi. *Çukurova Medical Journal*, 46(1), 283-291. <https://doi.org/10.17826/cumj.794585>
- Zavala, G.A., Ainscough, T.S., & Jimenez-Moreno, A.C. (2022). Barriers to a healthy diet and physical activity in Mexican adults: Results from the mexican health and nutrition survey. *Nutrition Bulletin*, 47(3), 298-306. <https://doi.org/10.1111/nbu.12568>
- Zenu, S., Abebe, E., Reshad, M., Dessie, Y., Debalke, R., & Berkessa, T. (2023). Non-adherence to the World Health Organization's physical activity recommendations and associated factors among healthy adults in urban centers of Southwest Ethiopia. *PLOS Global Public Health*, 3(1), e0001451. <https://doi.org/10.1371/journal.pgph.0001451>
- Zümbül, S. (2021). Bilinçli farkındalık temelli bilişsel terapi: bir inceleme çalışması. *İstanbul Aydın Üniversitesi Sosyal Bilimler Dergisi*, 13(1), 155-194.



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