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ÇALIŞAN BİREYLERİN FİZİKSEL AKTİVİTE DÜZEYLERİNİN İNCELENMESİ

Gülşah EROL[1], Murat BİLGE[1], Ayda KARACA[2], Damla Selin YILDIRIM[3]
[1]Faculty of Sports Sciences, Kırıkkale University; [2]Faculty of Sports Sciences, Hacettepe University,[3]Faculty of Sports Sciences, Lokman Hekim University

Özet

Bu çalışmanın amacı, çalışan bireylerin fiziksel aktivite süreleri, fiziksel aktivite şiddetleri, harcadıkları enerji ile ortalama metabolik eşdeğer (MET/saat) değerlerinin; cinsiyet ve yaşa göre incelenmesidir. Çalışmaya, 18 ile 65 yaşları arasında 263 kadın ve 197 erkek olmak üzere toplam 460 gönüllü katılmıştır. Gönüllülere, Fiziksel Aktivite Değerlendirme Anketi, Uluslararası Fiziksel Aktivite Anketi-Kısa Formu ve Kişisel Bilgi Formu kendini değerlendirme yöntemi ile uygulanmıştır. Veriler SPSS 20.0 programı ile analiz edilmiştir. Normal dağılım gösteren değişkenler için grupların karşılaştırılmasında bağımsız örneklem t testi ve tek yönlü varyans analizi; normal dağılım göstermeyen değişkenler için ise Mann-Whitney U ve Kruskal-Wallis testleri kullanılmıştır ($p<0.05$). İş yerinde oturma, ulaşım amaçlı yürüyüş, ulaşım ve evde oturarak yapılan aktivite sürelerinde erkeklerde kadınlardan daha uzun olduğu; evde ayakta yapılan fiziksel aktivite için harcanan sürenin kadınlarda erkeklerden daha uzun olduğu saptanmıştır. Çalışanların orta-yüksek şiddetli fiziksel aktiviteye katılım süresi açısından yaş grupları arasında istatistiksel açıdan anlamlı fark olduğu, yaş arttıkça orta ve yüksek şiddetli fiziksel aktiviteye katılım süresinin azaldığı bulunmuştur. Hem kadınların hem de erkeklerin yaklaşık ¾'ü öğle molasında yürüyüş yapmadığı, 45 yaş ve üzerindeki çalışanların öğle molasında yürüyüş yapma oranlarının diğer yaş gruplarında çalışanlardan daha yüksek olduğu bulunmuştur ($p<0.05$). Sonuç olarak, kadınların evde ayakta yapılan aktiviteler haricinde diğer tüm aktivite alanlarına katılım sürelerinin erkeklere göre daha kısa olduğu, yaş arttıkça orta-yüksek şiddette yapılan fiziksel aktivitelere katılım süresinin azaldığı, kadınların ulaşım amaçlı yürüyüş süresinin erkeklere göre daha uzun olduğu, ancak öğlen arası yürüyüş süreleri arasında istatistiksel olarak fark olmadığı görülmüştür.

Anahtar Kelimeler: Hareketsiz yaşam tarzı, Enerji harcaması, Metabolik eşitlik, Orta şiddetli fiziksel aktivite, Şiddetli fiziksel aktivite

AN EXAMINATION ON PHYSICAL ACTIVITY LEVELS OF EMPLOYED INDIVIDUALS

Abstract

The aim of this study is to examine the physical activity duration, intensity, energy expenditure, and average metabolic equivalent (MET/h) values of employed individuals, as well as how they differ by gender and age. The study included 460 volunteers, 263 women and 197 men ranging in age from 18 to 65. Physical Activity Assessment Questionnaire (PAAQ), International Physical Activity Questionnaire-Short Form (IPAQ-SF), and Personal Information Form were applied to the volunteers with the self-assessment method. The data were analyzed with the SPSS 20.0 program. Independent sample t-test and one-way analysis of variance in comparison of groups for normally distributed variables; Mann-Whitney U and Kruskal-Wallis tests were used for non-normally distributed variables. It was determined that durations of "sitting at work, walking for transportation, transportation, and activities are done sitting at home" were longer in males compared to females, and the duration of standing physical activity at home was longer in females compared to males. It was found that there was a statistically significant difference between the age groups in terms of the duration of moderate-to-vigorous physical activities participation of the employees, and the duration of participation in moderate-to-vigorous physical activity decreased as the age increased. It has been found that about ¾ of both female and male do not walk during the lunch break, and the rate of walking during the lunch break of employees aged 45 and over is higher than those of other age groups ($p<0.05$). As a result, it was observed that the participation time of females in all activity areas except standing activities at home was shorter compared to males and that as age increases, the duration of participation in moderate-to-vigorous physical activity decreases and that female's walking time for transportation purposes is longer than men's, but there is no difference between lunch break walking times.

Key Words: Sedentary lifestyle, Energy expenditure, Metabolic equivalent, Moderate physical activity, Vigorous physical activity

Corresponding Author: *Damla Selin Yıldırım, Lokman Hekim University,* selin.yildirim@lokmanhekim.edu.tr

INTRODUCTION

Physical activity (PA) is defined as body movements produced by skeletal muscles that provide a significant increase in energy expenditure in addition to resting energy expenditure (Vural, 2010). The World Health Organization (WHO) emphasizes the significance of consistent PA in the treatment and prevention of conditions like colon and breast cancer, stroke, cardiovascular disease, type 2 diabetes, obesity, depression, and anxiety (Barengo et al., 2004; Burton and Turrell, 2000; Haskel et al., 2007; Haapala et al., 2020; Melero-Cañas et al., 2021). Regular PA has been found to improve muscle strength, body balance, coordination, and metabolic function, and stated that it provides improvement lipid profile, bone density, insulin levels, and immune functions (Genç et al., 2011; Guthold et al., 2020; Vural et al., 2010; Yancey et al., 2004). Because of its harmful impact on individual health, the sedentary lifestyle, which is prevalent today, is a major public health issue (Guthold et al., 2008; Sianoja et al., 2018).

A sedentary lifestyle has been linked to the development of cardiovascular disease, diabetes, osteoporosis, and other hypokinetic disorders, as well as the risk of premature death, according to epidemiological studies (Rodriguez-Hernandez and Wadsworth, 2019; Wang et al., 2021; Warburton et al., 2006). There are four basic areas where one can engage in physical activity during the day, including exercise, sports, games, and a variety of other activities: the workplace, transportation, domestic work, and leisure activities (Ketels et al., 2019; Vural et al., 2010). Accordingly, physical activity is required to increase the standard of living in individuals, to reduce problems arising from intense competition, environment and stress of professional life, to live healthy and long, and to minimize age-related health risks (Akyol et al., 2008; Arslan et al., 2003; Özer et al., 2008; Vural et al., 2010). In view of these benefits, international guidelines recommend performing at least 30 minutes of moderate-to-vigorous physical activity five days a week (Ketels et al., 2019).

Moderate-to-vigorous PA and work-related activities in leisure time have an important role in reducing the risk of stroke, cardiovascular diseases, metabolic diseases, and death in both genders (Burton and Turrell, 2000; Holtermann et al., 2021; Ketels et al., 2019; McEachan ve ark., 2008; Rodriguez-Hernandez and Wadsworth, 2019; Tural, 2020). Although there are population-based studies on physical inactivity and its associated variables in developed countries, similar studies are less common in developing countries (Genç et al., 2011).

In this regard, this study aims to examine the values of the time (hours/week) that employed individuals spend on work, transportation, home, sports, moderate-to-vigorous physical activities, according to gender and age.

MATERIAL AND METHODS

Research Model

This study assessed the physical activity levels of employed individuals using an descriptive model.

Research Group

702 volunteers working in Çankaya Municipality ranging in age from 18 to 65 participated in the research. The questionnaires were applied to 702 people, but the data of 460 employees, 263 females (mean age: 37.79± 10.10), and 197 males (mean age: 41.11± 10.90), could be included in the sample. 242 questionnaires were not included in the study due to too many incomplete fillings or low data entry. Ethics committee approval was obtained from Hacettepe University (Date: 20.11 2018; Issue: 35853172/431-1387).

Data Collection Tools

Personal Information Form

A Personal Information Form comprising 17 questions was produced by the researchers.

Physical activity assessment questionnaire (PAAQ)

PAAQ, which was developed by Karaca et al. (2000) and whose reliability and validity was determined, consists of work, transportation, housework, stair climbing, and sports activities sections. The reliability of the PAAQ varies between r=.36 and r=.70 according to the parts of the questionnaire. Its validity, on the other hand, is r=.72. In this study, other components were employed aside from stair climbing.

International physical activity questionnaire-short form (IPAQ-SF)

"International Physical Activity Questionnaire-Short Form" (IPAQ-SF), developed by Craig in 2003 and adapted into Turkish by Ozturk in 2005, was utilized to determine the total amount and duration of energy spent on Moderate-to-vigorous PA. In the study conducted by Öztürk (2005), it has been shown that the reliability coefficient of the IPAQ-SF is r=.69, and the criterion validity coefficient is r=.30. The IPAQ consists of seven questions that include vigorous PA, moderate PA, duration of walking, and sitting in the last seven days.

Data collection

Necessary approval to collect study data was obtained from Çankaya Municipality Human Resources and Education Directorate. "Informed Consent Form" was signed after the participants were informed about the study. During the installation and collection of the questionnaires, confidentiality was maintained. The questionnaires were administered to the participants in their own offices using the "self-assessment method."

Statistical Analysis

The data were analyzed with the SPSS 20.0 (Statistical Package for the Social Sciences 20.0) program. For parametric tests, the mean and standard deviation values were used as descriptive statistics. For normally distributed variables, the independent sample t-test and one-way analysis of variance were used to compare groups. Mann-Whitney U test and Kruskal-Wallis analysis of variance were used for non-normally distributed variables. Significance level set at $p < 0.05$.

RESULTS

Demographic information of employed individuals regarding age, height, and body weight by gender is shown in Table 1.

Table 1. Demographic information of age, height, and body weight variables of employed individuals by gender

Variables	Female (n=263)		Male (n=197)	
	$\bar{x}$	SD	$\bar{x}$	SD
Age (years)	37.79	10.10	41.11	10.90
Height (cm)	164.90	6.27	174.93	7.96
BW (kg)	64.35	10.68	81.08	13.06
BMI	23.5	2.39	26.4	2.55

The frequency and percentage distributions of employed individuals' participation in low, moderate, vigorous, and moderate-to-vigorous PA according to IPAQ-SF classification according to gender and age are shown in Table 2.

Table 2. Distribution of PA levels of employed individuals by gender and age

		Low PA		Moderate PA		Vigorous PA		Moderate-to-Vigorous PA	
	n	f	%	f	%	f	%	f	%
Female	263	117	44.82	124	47.50	20	7.66	144	55.17
Male	197	93	47.20	75	38.07	29	14.72	104	52.79
≤34 years	169	69	40.82	74	43.7	26	15.3	100	59.17
35-44 years	139	57	41.00	68	48.92	14	10.07	82	58.99
≥45 years	152	85	55.92	58	38.15	9	5.92	67	44.07

The comparison of work, transportation, home, sports, moderate-to-vigorous PA durations (hours/week) of employed individuals by gender is shown in Table 3.

Table 3. The comparison of work, transportation, home, sports, moderate-to-vigorous PA durations (hours/week) by gender

Parameter			**Female** (n=263) $\bar{x} \pm Ss$	**Male** (n=197) $\bar{x} \pm Ss$	**t**	**Z**	**p**
Work Activities (hours/week)		Sitting	13.82±14.06	18.34±13.94	-3.41		0.001*
		Stand	22.71±15.31	22.48±13.49		-.90	0.367
Transportation Purpose Walking (hours/week)		Weekday	0.32±1.28	0.67±2.36		-2.99	0.003*
		Weekend	0.29±0.66	0.37±0.80		-1.17	0.240
		Total	0.61±1.64	1.04±2.77		-3.29	0.001*
Transportation (hours/week)		Weekday	0.66±2.29	1.62±3.50		-3.34	0.001*
		Weekend	0.63±1.55	0.94±1.64	-2.03		0.043*
		Total	1.29±3.44	2.56±4.28		-3.29	0.001*
At home	Sitting activities (hours/week)	Weekday	2.51±7.58	3.90±8.18		-2.72	0.006*
		Weekend	1.66±3.13	1.84±3.19	-.61		.541
		Total	4.19±8.92	5.77±10.49		-.1.20	.227
	Standing activities (hours/week)	Weekday	2.05±3.90	0.85±3.21		-4.23	0.000*
		Weekend	1.76±3.05	0.69±1.89		-4.19	0.000*
		Total	3.81±5.93	1.54±4.5		-5.00	0.000*
	All activities (hours/week)	Weekday	4.56±9.20	4.75±8.90	-.21		0.833
		Weekend	3.42±5.27	2.54±3.90		-1.12	0.259
		Total	8.00±12.73	7.32±11.84	.57		.563
Sport (hours/week)		Weekday	0.73±1.51	0.78±1.79	-0.35		0.723
		Weekend	0.33±0.92	0.49±1.15		-1.33	0.182
		Total	1.06±2.20	1.27±2.71	-0.90		0.364
Moderate-to-vigorous physical activities (hours/week) (Walking Included)		Total	4.88±7.69	6.39±9.75		-1.73	0.082

*** p<0.05**

As seen in Table 3, it was observed that the time spent on time spent sitting at work including working and resting, duration of transportation purpose walking (weekdays and total), transportation time (weekdays, weekends and total), and activities done at home (weekdays), was longer in a male employee than in females ($p<0.05$). It was found that women spent more time standing at home than men did throughout the week, on the weekends, and overall ($p<0.05$).

The comparison of work, transportation, home, sports, moderate-to-vigorous PA durations (hours/week) of employed individuals by age is shown in Table 4.

Table 4. The comparison of work, transportation, home, sports, moderate-to-vigorous PA durations (hours/week) by age

Parameter			≤34 years (n=169)		35-44 years (n=139)		≥45 years (n=152)				
			$\bar{x} \pm Ss$		$\bar{x} \pm Ss$		$\bar{x} \pm Ss$		F	X^2	p
Work Activities (hours/week)		Sitting	15.3	14.79	18.74	15.52	13.72	11.89		3.75	0.15
		Stand	21.95	14.72	21.33	15.63	24.43	13.18		1.98	0.37
Transportation Purpose Walking (hours/week)		Weekday	0.45	1.76	0.61	2.05	0.34	1.66	0.80		0.44
		Weekend	0.34	0.78	0.35	0.73	0.29	0.65	0.31		0.73
		Total	0.79	2.54	0.96	2.78	0.63	2.31	1.11		1.17
Transportation (hours/week)		Weekday	1.03	3.13	1.32	3.02	0.89	2.49	0.83		0.43
		Weekend	0.83	1.56	0.84	1.94	0.61	1.21	0.99		0.37
		Total	1.86	4.56	2.16	4.96	1.5	3.7	1.82		0.80
At home	Sitting activities (hours/week)	Weekday	2.87	7.91	2.70	7.31	3.70	8.26	1.07		0.51
		Weekend	1.72	2.94	1.71	3.08	1.84	3.50	0.08		0.92
		Total	4.59	10.85	4.41	10.39	5.54	11.76	1.15		1.42
	Standing activities (hours/week)	Weekday	4.61	9.47	4.41	8.93	5.57	10.40	0.39		0.67
		Weekend	1.61	4.10	1.65	3.88	1.31	2.84		0.89	0.63
		Total	6.22	13.57	6.06	12.81	6.88	13.24	0.39	0.89	1.30
	All activities (hours/week)	Weekday	1.10	1.96	1.32	2.71	1.49	3.23	0.22		0.80
		Weekend	2.72	5.54	2.98	5.48	2.81	5.40	0.44		0.64
		Total	3.82	7.5	4.3	8.19	4.3	8.63	0.66		1.44
Sport (hours/week)		Weekday	0.74	1.56	0.86	1.80	0.66	1.57	0.53		0.58
		Weekend	0.45	1.06	0.39	1.12	0.34	0.89	0.39		0.67
		Total	1.19	2.34	1.25	2.68	1.01	2.28	0.405		1.25
Moderate-to-vigorous physical activities (Walking Included) (hours/week)			6.92	10.76	5.40	7.77	4.04	6.20		7.47	0.024*

***p<0.05**

As seen in Table 4, it was determined that there is a statistically significant difference between the age groups in terms of the participation time of employed individuals in moderate-to-vigorous physical activities (MVPA) (walking included) ($p<0.05$).

Table 5 compares the amount of MET used during the previous seven days (MET-min/week) by employed people's PA level in contrast to their gender, age, education, and marital status.

Table 5. Comparison of the amount of MET (MET-min/week) spent by employed individuals on vigorous activities, moderate activities, walking, and total physical activity

	Vigorous PA (MET-min/week)					Moderate PA (MET-min/week)					Walking (MET-min/week)					Total PA (MET-min/week)			
	n	$\bar{x} \pm$	Ss	t/Z/F/X^2	p	$\bar{x} \pm$	Ss	t/Z/F/X^2	p	$\bar{x} \pm$	Ss	t/Z/F/X^2	p	$\bar{x} \pm$	Ss	t/ Z/F/X^2	p
Female	263	455	1359		0.07	221	918		0.25	895	1436	t=-1.25	0.21	1570.82	2505		0.04*

				Z=-1.79				Z=-1.13							-Z=-1.99		
Male	197	278	1052			137	520			740	1205			1154.03	1983		
≤34 years	169	623	1701			350	868			1040	1659			2012.86	3057		
35-44 years	139	335	1170	X^2=3,32	0.06	163	815	X^2=2.55	0.11	738	1174	F=1.34	0.26	1245.07	2118	X^2=1,18	0.27
≥45 years	152	234	912			88.8	471			738	1174			1060.91	1700		

t= t-test; Z= Mann-Whitney U test; F= One-Way Analysis of Variance; = Kruskal Wallis One-Way Analysis of Variance

As shown in Table 5, it was discovered that women spent more PA overall over the previous seven days than men ($p<0.05$). It was observed that there was no statistically significant difference between married and single individuals in any activity area except the time spent on moderate-to-vigorous physical activities (MVPA) including walking, and the average amount of MET spent on home activities on weekdays and total time ($p>0.05$). It was observed that the energy spent in terms of home activities, sports activities and transportation activity durations according to education level was significantly higher in those with university and higher education ($p<0.05$). It was observed that the energy spent by single individuals on vigorous physical activity (MET-min/week), moderate physical activity (MET-min/week), and total physical activities (MET-min/week) is higher compared to married individuals ($p<0.05$).

The frequency and percentage distributions of individuals walking and not walking during the lunch break according to gender and age are shown in Table 6.

Table 6. Comparison of individuals walking and not walking during the lunch break according to gender and age

	Walking at Lunch Break					**Walking time (minutes/day)**		t	F	p
	Those who perform			Those who do not perform		Av.	SD			
	f		%	f	%	f	%			
Female	263	58	22.2	203	77.8	46.34	16.42	-0.467		.641
Male	197	59	29.9	138	70.1	47.79	17.15			
≤34 years	169	37	21.9	132	78.1	49.19	18.45			
35-44 years	139	31	22.3	108	77.7	49.59	18.49		1.16	.310
≥45 years	152	49	32.2	103	67.8	44.74	14.8			

As seen in Table 6, about ¾ of both females and males do not walk during the lunch break. Employees aged 45 and over are more likely to perform a walk during the lunch break than employees in other age groups. Employees who attended high school or less formal education walk less frequently during their lunch break than those with a university or more formal education. Married and single employees have similar rates of walking during the lunch break. The rate of both married and single individuals who do not walk is around 75%. No statistically significant difference was found between the duration of walking in terms of gender, age, education, and marital status of individuals walking during the lunch break ($p>0.05$).

DISCUSSION AND CONCLUSIONS

The aim of this study is to examine the physical activity duration, intensity, energy expenditure, and average metabolic equivalent (MET/h) values of employed individuals, as well as how they differ by gender and age.

In consequence of the findings obtained in the study, it was observed that the time spent on activities performed while sitting at work (hours/week) is longer in male employees than in females ($p<0.05$). It was observed that the duration of transportation purpose walking (hours/week) was longer in males than in females ($p<0.05$). It was observed that the time spent on transportation (hours/week) on weekdays, weekends, and in total was longer in males compared to females ($p<0.05$). In the study conducted by Bulut (2010) on the employee in the physical therapy and rehabilitation center, it was not tested whether there was a difference between the genders, but it was stated that the total walking time of males, including transportation, was longer compared to female. Vaizoğlu et al. (2004) found statistically significant differences between transportation and physical activity between men and women in their study on the level of physical activity in adults. In another study, significant differences were found in physical activity levels between genders, supporting our findings (Arabacı and Çankaya, 2007).

It was observed that males spend more time on activities done at home (weekdays) ($p<0.05$). Besides, it was observed that females had higher values in terms of participation time (hours/week) to standing activities at home (weekdays, weekends, total) ($p<0.05$). It was observed that there was no statistically significant difference in the amount of overall chores done by the genders ($p<0.05$). In the study conducted by Bulut (2010) on the employee in the physical therapy and rehabilitation center, it was not tested whether there was a difference between the genders, but it was stated that the total MET value spent by males on household activities is less compared to female.

There was no difference between the genders in terms of time (hours/week) spent participating in sports activities. In a study conducted by Karaca (2000) on employed individuals in the province of Ankara, similar to this study, it was observed that there was no difference between genders in the duration of participation in sports activities, but the average MET value spent on sports activities was higher in male compared to female ($p<0.05$). In another study, it was found that the average weekly total physical activity score of individuals working at a desk was 2249.62 MET-min/week. In addition, in this study, according to the sub-categories of the average amount of energy spent by individuals doing physical activity; It has been determined

that 555.74 MET-min/week is “severe”, 736.49 MET-min/week is “moderate”, 957.39 MET-min/week is “walking”, 3638.54 min/Week is “sitting”. In parallel with our findings, there were no significant differences in physical activity levels between the genders (Vural, 2010).

In the study, no difference was observed between the genders in terms of MVPA participation time, including walking ($p>0.05$). There was a statistically significant difference between age groups in terms of MVPA participation time, including walking ($p<0.05$). In a study conducted by Karaca (2000) on employed individuals in the province of Ankara, similarly, in this study, a statistically significant difference was observed between age groups when the MET/hour spent on home activities in 1 week was evaluated ($p<0.05$). In a study conducted in Brazil, 41.1% of individuals aged 20 and over were found to be inactive (Hallal, 2010). In a study conducted by Genç et al. (2002) on bank employees, it was found that those aged 40 and over had the highest level of physical activity.

In the study, except for time spent on MVPA, including walking, and average weekday MET and total time spent on home activities, no statistically significant difference was observed between married and single individuals in any field of activity ($p>0.05$). However, contrary to the results of our study, in the study conducted by Özüdoğru (2013), it was determined that the physical activity levels of the married personnel among the university personnel were higher than those of the single personnel. However, contrary to this result, in the study conducted by Deniz (2011) it was determined that the physical activity levels were lower in married people compared to singles. This may be due to the fact that the samples included different groups.

It was observed that individuals with university or higher education were higher in terms of duration of sports activities, home activities, transportation activities (hours/week) according to the educational background ($p<0.05$). In the study conducted by Korkmaz and Demirkıran (2017) to evaluate the physical activity level of the health personnel working in the hospital, it was determined that there was no statistically significant difference between the physical activity level and the educational status variable. In a study conducted by Can (2013) to compare the methods of measuring physical activity level in women who work at desks and to examine the factors affecting physical activity, it was observed that there was no statistically significant difference between the level of physical activity and the variable of educational status. It can be thought that the reasons for these are due to the different groups in the samples.

It was observed that there was no statistically significant difference in the amount of energy expended when walking between married and single individuals. In a study conducted by

Burton and Turrell (2000) on laborers, it was observed that low-intensity physical activity increased with increasing age

About ¾ of both females and males do not walk during the lunch break. Employees aged 45 and over are more likely to perform a walk during the lunch break than employees in other age groups. Employees who attended high school or less formal education walk less frequently during their lunch break than those with a university or more formal education. Married and single employees have similar rates of walking during the lunch break. The rate of both married and single individuals who do not walk is around 75%. No statistically significant difference was found between the duration of walking in terms of gender, age, education, and marital status of individuals walking during the lunch break ($p>0.05$). In the study conducted by Cooper et al. (2000), it was observed that the rate of walking at lunch break in non-obese individuals is higher than that of obese individuals.

Consequently, it was observed that the time spent on time spent sitting at work including working and resting, duration of transportation purpose walking (weekdays and total), transportation time (weekdays, weekends and total), and activities done at home (weekdays), was longer in a male employee than in females ($p<0.05$). It was observed that the time spent for standing physical activities at home (weekdays, weekends, and total) was longer in females than in males ($p<0.05$).

It was determined that there was a statistically significant difference between age groups in terms of participation time of employed individuals in moderate-to-vigorous physical activities (walking included), and the duration of participation in moderate-to-vigorous physical activities decreased as age increased ($p<0.05$).

SUGGESTIONS

In consequence of this study, the following recommendations can be developed:

1. It may be recommended that organization to develop educational materials in the form of brochures, books, booklets, and magazines, plan various training sessions, and offer opportunities to increase physical activity. These materials should cover the benefits of desk exercises, the advantages of being physically active during lunch breaks, and the effects of regular physical activity on health.
2. Regular exercise is among the things that should not be neglected for employed individuals. Even though this may appear challenging at the workplace, they can actually live a more active life by making simple changes to their everyday routines.

3. Blue and white-collar employees can be addressed in the field of future studies.
4. Employees can be categorized according to their occupational groups in future studies.

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