Araştırma Makalesi

Spor Bilimleri Dergisi / Hacettepe Journal of Sport Sciences
DOI: https://doi.org/10.17644/sbd.782411 2020, 31 (4), 174-184

Do Children Engaged in Organized Sports Meet the Recommended Levels of Step Counts?

Organize Edilmiş Sporlara Katılan Çocuklar Önerilen Adım Sayısını Karşılıyor mu?

[1]Necip DEMİRCİ

[1]Ayda KARACA

[2]Ş. Alpan CİNEMRE

[2]Evrim ÜNVER

[1]Division of Physical Activity and Health, Department of Recreation, Hacettepe University, Faculty of Sport Sciences, Ankara, Turkey

[2]Division of Movement and Training Sciences, Department of Exercise and Sport Sciences, Hacettepe University, Faculty of Sport Sciences, Ankara, Turkey

Yazışma Adresi
Corresponding Address:

Res. Asst. Necip DEMİRCİ

ORCID: 0000-0003-0147-8332

Hacettepe University, Faculty of Sport Sciences, Department of Recreation, Division of Physical Activity and Health, Beytepe, Ankara

E-posta:
necip.demirci@hacettepe.edu.tr

Geliş Tarihi (Received): 19.08.2020
Kabul Tarihi (Accepted): 08.01.2021

ÖZ

Bu çalışmanın amacı, organize edilmiş sporlara katılan çocukların, spesifik zaman dilimlerinde (toplam hafta, hafta içi, okul içi, okul dışı, hafta sonu, cumartesi, pazar, spor yapılan günler ve spor yapılmayan günlerde) adım sayılarını incelemek ve adım sayılarının önerilen düzeyde olup olmadığını belirlemektir. Bu çalışmaya gönüllü olarak 41 erkek ve 39 kız (11.97 ± 0,84 yıl) çocuk katılmıştır. Çocukların boy ve vücut ağırlıkları ölçümü yapılmış ve ActiGraph wGT3x-BT marka akselerometreler, elastik kemer aracılığı ile çocukların baskın olan el bileğine giyilerek adım sayıları belirlenmiştir. Bu cihazı katılımcılardan 7 gün boyunca giymeleri istenmiştir. Hem kız hem de erkek çocukların spesifik zaman dilimleri arasındaki farkın incelenmesinde Bağımsız Örneklem T-Testi analizi uygulanmıştır. Çocukların tüm hafta, hafta içi, okul içi, cumartesi, spor yapılan günler ve spor yapılmayan günlerdeki adım sayıları bakımından cinsiyetler arasında anlamlı fark elde edildiği ve erkek çocukların adım sayısının kız çocuklarınkinden daha yüksek olduğu ortaya çıkmıştır ($p < 0,05$). Erkek çocukların okul içi ve okul dışına ait adım sayıları arasında anlamlı fark elde edilmemiştir ($p > 0,05$). Haftalık ortalama adım sayısı bakımından kız çocukların %56.4'ü, erkek çocukların ise %51.2'si önerilen adım sayısını karşılamışlardır. Kız ve erkek çocukların spor yapılan günlerde attıkları adım sayılarının spor yapılmayan günlerden daha yüksek olduğu saptanmıştır ($p < 0,05$). Hem kızların hem de erkeklerin hafta içi günlere ait adım sayıları, hafta sonundan daha fazladır ($p < 0,05$). Erkek çocukların haftalık ortalama, hafta içi, okul içi, cumartesi günü, spor yapılan ve spor yapılmayan günlere ait adım sayılarının kız çocukların adım sayılarından daha yüksek olduğu ortaya çıkmıştır ($p < 0,05$). Kız çocukları için önerilen adım sayısına ulaşma oranının en yüksek olduğu zaman diliminin (%84,6) spor yapılan günlerin olduğu görülmüştür. Hem kız hem de erkek çocukların hafta içi adım sayılarının hafta sonuna kıyasla daha yüksek olduğu sonucuna varılmıştır. Ayrıca kız ve erkek çocukların spor yapılan günlerde attıkları adım sayısının spor yapılmayan günlerden daha yüksek olduğu bulunmuştur**.**

Anahtar Kelimeler: *Çocuklar, Adım sayısı, Okul içi, Okul dışı, Organize edilmiş sporlar*

ABSTRACT

This study aimed to calculate the step counts of children who regularly participate in organized sports within specific time periods (weekday, weekend, school time, out-of-school, sports days, days without sports) and to determine whether they reach the recommended activity level. Forty-one boys and 39 girls (11.97±.84 yrs. for all participants) participated in this study voluntarily. Step counts were determined by using ActiGraph wGT3x-BT. It was worn on their dominant wrist for seven days. An Independent Samples t-test was used to examine the difference between the genders. A Paired-Samples t-Test was used to compare the step counts of specific periods in both girls and boys. There were significant differences in step counts between boys and girls in terms of the whole week, weekdays, school time, Saturdays, sports days, and non-sports days, and boys reached more step counts than girls ($p<0.05$). No significant difference was found between school time and out of school time for boys. Weekly average, 56.4% of girls and 51.2% of boys meet the recommended number of steps. The number of steps taken by both girls and boys during the sport days was more than non-sport days ($p < 0,05$). Moreover, girls and boys on weekdays took more the number of steps than on a weekend ($p < 0,05$). In conclusion, boys reached more number of steps than girls in terms of the weekly average, weekdays, school time, Saturday, sports days, and non-sports days. The period in which the rate of reaching the recommended step counts for girls was highest (84.6%) on sports days. Both girls and boys had higher step counts on weekdays than on the weekends. The number of steps for both girls and boys on sports days was more than non-sport days.

Keywords: *Children, Step count, School time, Out-of-school time, Organized sports*

Author Note: The study was prepared by Necip Demirci under the supervision of Associate Professor Dr. Ayda Karaca as a Master Thesis in the Department of Sport Sciences and Technology at Hacettepe University Institute of Health Sciences.

INTRODUCTION

It has been proved that having physical activity at the recommended level is beneficial for health (Brooke et al., 2014; Burns et al., 2015; Janssen and LeBlanc, 2010) and useful in the prevention of some chronic diseases (Centers for Disease Control and Prevention [CDC], 2017a). Physical activity level gradually decreases with age (Nader et al., 2008). Besides, biological, psychological, socio-cultural, and environmental factors influence the activity levels of children (Sterdt et al., 2014). It was seen that in Europe and North America, the majority of adolescents were unable to meet moderate and vigorous physical activity at the recommended level (Kalman et al., 2015), and sedentary lifestyle is increasing (Centers for Disease Control and Prevention [CDC], 2017b).

The World Health Organization (WHO) indicates that children at school-age should have a minimum of 60 minutes of moderate-to-vigorous physical activity each day (World Health Organisation [WHO], 2017). Moreover, the Turkish Physical Activity Guideline emphasized that high-intensity exercises should be added to the activity program to promote health benefits, and 12-18 aged children should be encouraged to sports such as jumping rope, volleyball, and basketball to improve bone health (Ministry of Health [MH], 2014).

Walking and running which is the most common form of physical activity are generally preferred in physical activity programs. For this reason, there have been many studies demonstrating that the step counts were measured with objective monitors such as a pedometer or accelerometer (Silva et al., 2018). Therefore, objectively measured step-based physical activity has been gradually used to examine children's and adolescents' daily ambulatory type activities. The step counts are used as a nationally representative normative step-defined value because the simplicity of step counts makes it an ideal measurement variable for being practical and being used in the comparison (Barreira et al., 2015). The accelerometer data used in the 2005–2006 NHANES survey in adolescents aged 12-17 years analyzed by Adams et al. (2013) reveal that girls taken 9.449 steps/day and boys taken 11.489 steps/day.

There are various cut-off points for the number of steps recommended for children (Brusseau and Kulinna, 2015; Duncan et al., 2007; Tudor-Locke et al., 2004). For example, a minimum of 11,000 (Vincent and Pangrazi, 2002), 12,000 (Tudor-Locke et al., 2009), 13,000 (Duncan et al., 2007) steps each day have been recommended for girls; while this is 13,000 (Vincent and Pangrazi, 2002), 15,000 (Tudor-Locke et al., 2009), or 16,000 (Duncan et al., 2007) steps for boys. However, the recommended number of steps for children may vary depending on their preferences regarding different physical activity domains such as school, transportation, and leisure time. Participating in sports regularly (Kwon et al., 2015), in-school and out-of-school (Brooke et al., 2014; Burns et al., 2015), on weekdays and weekends (Brooke et al., 2014; Duncan et al., 2007) is a factor that increases the level of activity in children. Although during school hours, physical education and other lessons contribute to children's physical activity, the results of several earlier studies indicated that the majority of children and adolescents do not meet the recommended activity thresholds (Spittaels et al., 2012).

When considered the studies conducted on evaluating the physical activity of children within specific periods in literature, studies with the subject showed that step counts of children were evaluated according to specific periods such as recess, out-of-school (Beighle et al., 2006), before school, lunch-time, after school (Tudor-Locke et al., 2011), in school, on weekend and weekdays (Wang et al., 2014; Hardman et al., 2009). However, to the authors' knowledge, it was appeared not to be researched on children who regularly engaged in the organized sport of the step counts examined within specific periods in literature. The examination of the step counts taken on sports days will provide an opportunity to understand whether to role important in increasing the step counts of organized sports.

It is also known that children who do not take part in sports regularly are usually not active enough. Thus, regular exercise is effective for reaching the recommended activity levels (Kwon et al., 2015; Marques et al., 2016). Wickel and Belton (2016) suggested that it is beneficial to structure out-of-school time for increasing physical activity levels of children, such as participating in exercise and sports (Guagliano et al., 2013; Hebert et al., 2015). However, the fact that children take part in organized sports regularly but not every day may not necessarily mean that they reach the recommended level of activity. Parents may assume that their children who are attending organized sports only a few days a week are sufficiently active. But even children who participate in any organized sports are not active enough on days when they are not doing sports.

The purpose of this study was to determine the step counts of children who regularly exercise a few days a week, within specific periods (weekdays, weekends, school time, out-of-school, sports days, days without sports, etc.) and whether they meet the recommended activity level.

METHODS

Participants: In this study, data were collected from a total of 118 children (58 boys, 60 girls) with ActiGraph wGT3X-BT for seven days of the week. Accelerometer data collected at least four days on weekdays and one weekend day with a minimum of eight hours wearing time were accepted as the inclusion criteria of the study. However, due to data that does not meet the inclusion criteria, 38 children (17 boys and 21 girls) excluded from the study. Thus, the data included in the study were collected from 80 healthy (39 girls and 41 boys) children aged 11-13 years (mean age 11.97±.84 yrs) who participated in organized sports regularly. Descriptive statistics related to the age, gender, height, bodyweight, and body mass index (BMI) of the children are given in Table 1. Children who regularly participate in organized sports (football, basketball, volleyball) for 2-4 days per week for at least one month were included in the study. The percentage of children engaging in sports per each day of sports days was 16.25% on Monday, 53.75% on Thuesday, 40% on Wednesday, 60% on Thursday, 18.75% on Friday, 95% on Saturday, 83.75% on Sunday. Data was collected between March and May of 2017 at various sports clubs in Ankara. This study was approved by Hacettepe University Non-interventional Clinical Research Ethics Board (GO 17/100). All children and their parents were briefed on the measurement procedures and purposes of the study. Each participants' parents signed informed consent. Therefore, the authors have written consents from the families, also consent was verbally obtained from each child.

Table 1. Characteristics of participants

	Girls (n=39)		Boys (n=41)	
	Mean	SD	Mean	SD
Age (year)	12.00	0.79	11.95	0.89
Height (cm)	156.62	8.83	151.56	8.98
Body Weight (kg)	49.79	10.59	43.99	10.44
BMI	20.11	2.98	18.93	2.99

Instrumentation: A Tanita Leicester portable stadiometer HR 001 (USA), which measures with 0.1 precision, was used for height measurement. A Tanita TBF-401A (USA) was used for bodyweight measurement. ActiGraph wGT3X-BT (Pensacola, USA) wireless accelerometers were used for determining the number of steps.

Data Collection: Height and weight were measured standing in light clothes, without shoes, at the indoor sport court, before wearing the ActiGraph wGT3X-BT. The children were asked to wear an ActiGraph wGT3X-BT on their dominant wrist for seven consecutive days except when showering, swimming, or taking part in any water activities. The epoch length was set at five seconds. Children who did not want to wear the accelerometer during bedtime were asked to remove it just before bedtime and put it back on as soon as possible after waking up in the morning. The first day, the children wore the accelerometers in the sports clubs, and the last day the devices were collected by the researchers at the sports clubs. It was observed that some children forgot to wear the device for some days. Accelerometer data were included in the study if it was collected at least four days on weekdays and one weekend day with a minimum of eight hours wearing time.

Time Period for Determining the Number of Steps:

- The average number of steps per day: The average number of steps was measured for a minimum of four weekdays and one weekend day.
- The average number of steps on weekdays: The average number of steps was measured for a minimum of four weekdays.
- The average number of steps on weekends: The average number of steps was measured for either Saturday or Sunday or the average number of steps on both days.
- The number of steps on Saturday: Total number of steps on Saturday.
- The number of steps on Sunday: Total number of steps on Sunday.
- The average number of steps during school time: The average number of steps was measured during school time on at least four weekdays.
- The average number of steps out-of-school time: The average number of steps was measured before school and after school on at least four weekdays.
- The average number of steps per day during sports days: The average number of steps per day was measured on the days that the children engaged in sports at a sports club.
- The average number of steps per day on non-sports days: The average number of steps per day was measured on the days that children did not engage in sports at a sports club.

The obtained data were recorded as an Excel file by using the Actilife 6 software for analysis. The number of steps taken during school time and out-of-school time were determined. The cut-off point values for the recommended number of steps were determined as >13,000 steps/day for girls and >16,000 steps/days for boys (Duncan et al., 2007). The reason for the choice as cut-off point values of the recommended step counts by Duncan et al. (2006) which has more the step counts than other the cut-off point value is to use for reducing the risk of excess body fat in children. Excess body fat is considered an independent risk factor for non-communicable chronic diseases, such as type II diabetes, high blood pressure, etc. (Alves et al., 2017).

Statistical Analysis: The descriptive statistics were calculated as the mean and standard deviation. For each variable, the normality and homogeneity of variances were tested. Because of the effectuation of parametric assumptions, the significance test of the difference between the two means in the independent groups was applied to examine the difference between the genders. The confidence interval in this study was 95%. A Paired-Samples t-Test was used in the dependent groups in both girls and boys to compare the step numbers of weekdays and weekends, sport and non-sport days, and school time and out-of-school periods. Effect sizes were calculated using Cohen's d. Cohen's criteria for small (>0.20), moderate (> 0.50), and large (>0.80) effect sizes were used to aid the interpretation of results (Cohen, 1988)..

RESULTS

Table 2 represents the comparison of children's number of steps by gender. The results revealed that there were statistically significant differences between boys and girls in terms of the weekly average, weekdays, school time, Saturday, sports days, and non-sports days (see Table 2) ($p<0.05$). It was found that boys made significantly more steps than girls on the weekly average, weekdays, school time, Saturday, sports days, and non-sports days ($p<0,05$) (Table 2). However, there was no statistically significant difference between the genders ($p>0.05$) in terms of the average number of steps out-of-school, on Sundays and weekend days (see Table 2).

Table 2. Comparison of children's number of steps by gender

	Girls			Boys			p
	n	Mean	SD	n	Mean	SD	
Weekly Average	39	13242	2652	41	15762	2997	0.01*
Weekday	39	13760	2687	41	16580	3548	0.01*
School Time	39	6585	1707	41	8662	2375	0.01*
Out-Of-School	39	7307	1753	41	8089	2013	0.07
Weekend	33	12035	4231	36	13406	3056	0.13
Saturday	38	12521	5427	41	14982	4680	0.03*
Sunday	34	10999	4051	36	11922	3534	0.31
Sport Days	39	15663	3678	41	17654	4131	0.03*
Non-Sport Days	39	12374	2632	41	14984	3481	0.01*

* Significant difference in the step counts between girls and boys.

The period in which the rate of reaching the recommended number of steps for girls (minimum 13,000 steps/day) is highest (84.6%) on sports days. For boys, the achievement of the recommended number of steps (minimum 16,000 steps/day) is highest on sports days (61.0%) and on weekdays (63.4%) (see Table 3). On weekends, 66.7% of girls and 73.2% of boys do not meet the recommended number of steps. The rate of reaching the number of steps recommended on non-sport days was considerably less than on sports days. In girls, this rate was almost half (84.6% vs. 41.0%), while in boys, it was two thirds (61.0% vs. 41.5%) (see Table 3).

Table 3. Frequency distributions according to levels above and below the cut-off points of the children's number of steps

	Girls					Boys				
		<13000#		≥13000‡			<16000§		≥16000β	
	n	f	%	f	%	n	f	%	f	%
Weekly Average	39	17	43.6	22	56.4	41	20	48.8	21	51.2
Weekday	39	13	33.3	26	66.7	41	15	36.6	26	63.4
Weekend	39	26	66.7	13	33.3	41	30	73.2	11	26.8
Saturday	38	23	59.0	15	38.5	41	23	56.1	18	43.9
Sunday	34	26	66.7	8	20.5	41	32	78.0	4	9.8
Sport Days	39	6	15.4	33	84.6	41	16	39.0	25	61.0
Non-Sport Days	39	23	59.0	16	41.0	41	24	58.5	17	41.5

The cut-off point value reflects below of recommended step counts for girls.
‡ The cut-off point value reflects above of recommended step counts for girls.
§ The cut-off point value reflects below of recommended step counts for boys.
β The cut-off point value reflects above of recommended step counts for boys.

The difference in the number of steps for both girls and boys during the days when they were participating in sports and on days when they not do sports was more than 2500 steps (see Table 4) ($p < 0.001$). While the effect size of the significant difference obtained was found to be a moderate effect for boys (Cohen's $d = 0.66$), it was seen to have a greater effect in girls (Cohen's $d = 1.18$). It was found that both girls and boys had higher step counts on weekdays than on the weekends (see Table 4) ($p<0.01$; $p<0.001$). The effect size of the significant difference between weekdays and weekends was found to be small for girls (Cohen's $d = 0.48$) and moderate for boys (Cohen's $d = 0.73$). While the step counts of girls in school were statistically higher than outside school (see Table 4) ($p<0.04$, Cohen's $d= 0.33$), a significant difference was not found between the number of steps of school time and out-of-school for boys (see Table 4) ($p >0.16$), Cohen's $d= 0.22$).

Table 4. Comparison of the average step counts for different periods in both boys and girls

	Girls					Boys					All Participants				
	n	Mean	SD	p	*d*	n	Mean	SD	p	*d*	n	Mean	SD	p	Cohen'd Effect Size
Sport Days	39	15663	3678			41	17654	4131			80	16683	4018		
				0.001*	1.18###				0.001*	0.66##				0.001*	0.85###
Non-Sport Days	39	12374	2632			41	14984	3481			80	13711	3345		
Weekday	39	13760	2687			41	16580	3548			80	15208	3563		
				0.01*	0.48#				0.001*	0.73##				0.001*	0.61##
Weekend	33	12035	4231			36	13406	3056			69	12750	3702		
School Time	39	6585	1707			41	8662	2375			80	7649	2313		
				0.04*	0.33#				0.16	0.22#				0.83	-0.02
Out-Of-School	39	7307	1753			41	8089	2013			80	7708	1919		

*Significant difference in the step counts between various time period.
Small effect size (>0.20), ##moderate effect size (> 0.50), ### large effect size (>0.80)
d= Cohen's d Effect Size

DISCUSSION

The purpose of the study was to determine the step counts of children aged 11-13 years who regularly exercise on some days of the week within specific time periods (weekdays, weekends, school time, out-of-school, sports days, days without sports, etc.) and whether they meet the recommended activity level. Many studies indicate that the level of physical activity of boys is higher than that of girls (Carson et al., 2015; Gauthier et al., 2012; Hebert et al., 2015; Martinez-Gomez et al., 2010; Michalopoulou et al., 2011; Ploeg et al., 2012; Sigmund et al., 2015; Tudor-Locke et al., 2008). The results indicated that boys were more active than girls and that their average step counts were about 2500 steps higher than those of girls ($p <0.05$) (see Table 2). This result is in line with the findings of the previous studies (Gauthier et al., 2012; Tudor-Locke et al., 2008; Vincent and Pangrazi, 2002). The reason for the difference among gender may seem to depend on the type and intensity of the activity. Boys' vigorous physical activity levels are prone to higher than girls' (Sherar et al., 2007). In the present study, the type and intensity of the activity may cause obtaining gender

differences when the step counts were considered to change depending on the type and intensity of the activity. Furthermore, Bailey et al. (2012) found that boys had higher moderate to vigorous physical activity levels than girls during school time (class time, lunch break, and school recess). Therefore, the result in favor of boys in terms of the step counts in school time in which was spent most of the day may be decisive in revealing gender difference. In this study, the average number of steps per day was found to be approximately 2300 steps more for girls and 2500 steps more for boys when compared with the study conducted by Michalopoulou et al. (2011). The reason for this difference might be that the children who took part in this study were participating in sports regularly for 2-4 days a week.

Martinez-Gomez et al. (2010) revealed that the percentage of girls who met the recommended level of physical activity was lower than that of boys (28.1% and 58.8%, respectively). As seen in the study conducted by Guagliano et al. (2013), the present study also concluded that engaging in regular sports activities makes a significant contribution to the achievement of the girls' number of steps (see Table 3). In this research, the percentage of meeting the recommended number of steps (for girls: ≥13,000 steps/day; for boys: ≥16,000 steps/day) was significantly higher in girls, especially on the days when they engaged in sports regularly (girls: 84.6%; boys: 61.0%). On non-sports days, this ratio dropped by about 40% for both genders (see Table 3). In this study, while girls were taking nearly 3,000 more steps on the days when they were playing sports than on the days without sports, boys took about 2500 steps more (see Table 4). This increase in both the rate of meeting the recommended number of steps and the number of steps taken during sports days reveals the importance of organized sports. Bulca et al. (2020) examining the step counts of Turkish Middle School Students found that the average number of steps taken on a weekday was 9154.1 steps/day for boys and 8735.7 steps/day for girls. Öztürk Erol et al. (2020) revealed that more than half of both girls (11660 steps/day) and boys (13607 steps/day) did not achieve recommended daily step counts on a weekly average. In another study conducted in Turkey, Saygın and Ceylan (2017) reveal that boys take on average 14287.53 steps/day and girls take 11879.05. It seems that both girls and boys of our study reached more step counts, compared to these studies conducted on Turkish children.

Similar to this study, previous studies have reported the number of weekday steps in children was higher than the number of steps on the weekend (Brooke et al., 2014; Brusseau et al., 2011; Kristensen et al., 2008; Sigmund et al., 2015). On weekends, children may spend more time on their homework or in front of a screen for entertainment. The higher number of steps on weekdays could be due to the fact that the children were active during school hours and were also training during the week. Studies examining the difference between the number of step counts taken Sunday and Saturday are quite limited. The findings obtained by Brusseau et al. (2011) demonstrated that children's number of step counts on Saturdays were more than Sundays. According to our estimation, it may be due to the fact that children spend more screen time and home on Sunday.

In the studies about children's school time and out-of-school physical activity levels, different findings have been found (Brooke et al., 2014). According to Silva et al. (2011), activity levels during school were significantly lower than out-of-school levels. Jauregui et al. (2011) stated that there was no difference between in-school and out-of-school physical activity (Brooke et al., 2014). The study of Long et al. (2013) on children aged 6-11 and 12-19 showed that the duration of in-school moderate-vigorous physical activity was higher than the duration of out-of-school MVPA. Ploeg et al. (2012) also stated that the number of in-school steps was higher than the number of out-of-school steps. In the present study, while the number of in-school steps for boys was higher than the number of out-of-school steps, the number of in-school steps for girls was lower than the number of out-of-school steps. Similar to the present study, Ploeg et al. (2012) emphasized that boys had higher step counts for school time and out-of-school than girls. The study conducted by Burns et al. (2015) indicated that the number of in-school steps had been effective in raising the daily step counts of children

above the recommended levels. It has been observed that physical activity during school breaks accounts for approximately one-third of the recommended activity level of 60 minutes and that the number of steps of boys was greater than the number of steps of girls during breaks (Ridgers et al., 2005). Pelclová et al. (2010) indicated that post-school physical activity contributes to total physical activity in their study on 15-year-old adolescents. In this study, the absence of differences between genders in the number of out-of-school steps (see Table 2) may be due to both boys and girls participating in out-of-school sports activities. One of the most important findings of the present study was the increase in the average number of steps taken by both boys and girls during periods when days of organized sports were included.

There were some limitations in this study. Children engaged in organized sports (football, volleyball, basketball) for 2-4 days a week. The sample size of the study is relatively low, and the age range of children who participated in the study is relatively small (11-13).

There were some strengths in the present study. ActiGraph wGT3x-BT accelerometer is a valid and reliable instrument as an objective method for assessing children's physical activity. Moreover, the monitoring period of free-living physical activity is relatively long (5-7 days, minimum of four weekdays, and one weekend).

Future studies should focus on a larger sample group, a wider age group, more sports branches, two (wrist-worn and waist-worn) accelerometer attachments at the same time. Unstructured recess and lunchtime and physical education classes during school hours and also training hours during out-of-school hours should be examined.

CONCLUSION

It has been revealed that: 1) boys were more active than girls, 2) the average number of steps on weekdays was higher than on weekends, 3) the average number of steps on sports days was more than the average number of steps on non-sports days, 4) the average number of school time steps for boys was higher than the number of out-of-school steps, while the average number of out-of-school steps for girls was higher than the number of in-school steps, 5) the average number of steps and the percentage of steps to reach the recommended number of steps were higher for children (especially girls) when they participate in out-of-school sports activities, and also the participation in out-of-school sports activities is effective in increasing the number of daily steps of children.

Implications of the findings: Globally, 81% of adolescents aged 11–17 years do not meet the WHO global recommendations on physical activity for health. The report obtained by WHO in 2015 showed that inactivity prevalence was 85-89.9% for girls and 75-79.9% for boys in Turkey. Accordingly, the prevalence of meeting MVPA recommendations is needed to increase in Turkey. In our study, given the step counts of children who regularly exercise, results showed that they meet the recommended step counts. In the sport days, both girls and boys reached recommended level of step counts but in the non-sport days, they did not reach recommended level of step counts. On the other hand, the findings demonstrated that regularly done organized sport out of school contributes to reaching the recommended step counts. Thus, participation in sports of children should be encouraged by both their teachers and parents. The school time in which take a large part of the weekday has a crucial role to be reached in the targeted step counts of children on weekdays. Therefore, this study may point out that it should be arranged by policymakers of the lesson curriculum that is needed to be integrated physical activity into the classroom and access to equipment and organized activities during break-times.

Acknowledgements: The authors would like to thank all the children who participated in this study and their families. The authors also would like to thank the responsible individuals at the sports clubs for their tremendous contribution to collecting data.

Conflicts of Interest: The authors declare no conflict of interest.

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