



RESEARCH ARTICLE

AN INVESTIGATION OF PARKS IN TERMS OF ACTIVE AND PASSIVE RECREATION: THE CASE OF EFELER, AYDIN (TÜRKİYE)

B. Kara¹, A. Bayram², Ö. Özsoy², B. Ar², C. Aykan², M. Yaman², Ö. Kazmacı² and S. Özçetin²

1. Professor Doctor, Department of Landscape Architecture, Aydın Adnan Menderes University, Aydın, Türkiye.
2. Student, Department of Landscape Architecture, Graduate School of Natural and Applied Sciences, Aydın Adnan Menderes University, Aydın, Türkiye.

Manuscript Info

Manuscript History

Received: 25 April 2024

Final Accepted: 28 May 2024

Published: June 2024

Key words:-

Active and Passive Recreation, Parks, Aydın, Türkiye

Abstract

Nowadays, human life is becoming better with recreational and leisure activities that play an essential role in people's lifestyles. Urban areas with recreational facilities, such as green spaces, invite city residents to spend their leisure time in places where they can benefit from nature (Lawal et al., 2011). As elements of the urban landscape, parks have numerous functions, such as providing environmental benefits through active and passive recreation and being wildlife habitats (Solecki and Welch, 1995). Almost all of the parks under the responsibility of Aydın Metropolitan Municipality and T.R. Efeler Municipality have "seating units" (95.65% and 83.33%, respectively), and most have "sports and fitness equipment" (82.61% and 43.10%, respectively) and "children's playgrounds" (56.52% and 61.49%, respectively). Whereas only one park under the responsibility of Aydın Metropolitan Municipality has a "bicycle path" and "skateboard track," no parks under the responsibility of T.R. Efeler Municipality have a "skateboard track" and "chess area." While there was no statistically significant difference between the neighborhoods in terms of the number of activities according to socio-economic status, a statistically significant difference was identified in terms of the number of activities between the parks under the responsibility of Aydın Metropolitan Municipality and T.R. Efeler Municipality.

Copy Right, IJAR, 2024,. All rights reserved.

Introduction:-

Health is essential not only for individuals but for the whole society. Protecting and strengthening oneself and society is rational and ensures an active and long life. It is possible to ensure an active and long life through engagement in active and passive recreation, i.e., recreational activities (Zaytsev et al., 2013). Nowadays, human life is becoming better with recreational and leisure activities that play an essential role in people's daily lifestyles (Lawal et al., 2011).

Recreational activities can be divided into two groups in general: active and passive recreation (U.S. Environmental Protection Agency, 2003; Tongpong, 2015; Narkhede and Dharia, 2018). Active recreation involves recreations where individuals engage in physical activity. Passive recreation includes recreations performed without physical activity. Physical activity may include recreational and sports activities (Sadeghi and Haghighat Bin, 2023). Active

recreation, which requires using special facilities, courses, fields, or equipment, can provide communities with opportunities to participate in individual sports, such as golf and skiing, and team sports, such as football and baseball. However, passive recreation does not require facilities prepared in advance, such as sports fields or pavilions (U.S. Environmental Protection Agency, 2003). Active recreation usually includes activities such as football, cricket, hockey, and other games, whereas passive recreation covers activities such as watching children, other people or wildlife, landscape viewing, reading, relaxing, or meeting friends (Woolley, 2003).

The concept of active living allows for numerous ways to acquire health benefits from physical activity, such as walking or cycling for transportation, exercise or pleasure, playing outdoors, working in the garden or gardening, climbing stairs, and using indoor and outdoor recreational facilities (Haider et al., 2013). Active living prevents all kinds of diseases. Hence people should not hesitate to participate in any recreational activities in their free time (Sani and Olaosebikan, 2018). Many diseases can be prevented if people's active physical exercises can be increased and adequate motivation can be provided (Kinczel et al., 2020).

Engagement in recreational activities is associated with enhanced physical, mental, and social health (U.S. Environmental Protection Agency, 2003). Active recreation benefits physical, mental, and social health (U.S. Environmental Protection Agency, 2003; Sadeghi and Haghighat Bin, 2023). Moreover, active recreation improves quality of life (U.S. Environmental Protection Agency, 2003). On the other hand, passive recreation offers visitors opportunities to explore nature actively (Stein et al., 2003), protects natural resources, allows for the renewal of ecosystem services, and renews animal and plant habitats (U.S. Environmental Protection Agency, 2003).

Parks and green spaces play ecological, aesthetic, and recreational roles in a city. They are necessary for the environmental and social well-being of citizens and the further humanization of the city (Gowda and Sridhara, 2008). Parks are basically designed to offer active and passive recreational opportunities to urban residents. Parks that can offer active or passive recreational opportunities to urban residents can contribute to the overall quality of life (QoL) (Lynch, 2007).

Strategies based on recreational activities have become the priority of urban development programs worldwide to improve quality of life (Sadeghi and Haghighat Bin, 2023). Activity opportunities are among the most important factors that make parks more attractive (Ayar et al., 2021). Parks, open green spaces, and recreational facilities should be understood as vital active recreation areas, and their distribution should be connected to social and environmental justice (Dahmann et al., 2010).

The study examined the active and passive recreational opportunities offered by parks in the central neighborhoods of Aydın province, Efeler district, and changes in these recreational opportunities according to the municipalities responsible for the parks and the socio-economic structures of the neighborhoods where they are located.

Methodology:-

StudyArea

Parks in the neighborhoods of Efeler district center, Aydın province, constitute the study area (Fig. 1). Parks were grouped according to the municipalities responsible for them and the socio-economic structures of the neighborhoods where they are located. According to responsibilities, parks were divided into two groups: parks under the responsibility of Aydın Metropolitan Municipality and parks under the responsibility of T.R. Efeler Municipality. According to their socio-economic structures, parks were divided into three groups: "Low-Middle-High." We visited the parks and identified their active and passive recreational opportunities. The list of neighborhoods and parks in the study area was obtained from Aydın Metropolitan Municipality and T.R. Efeler Municipality.

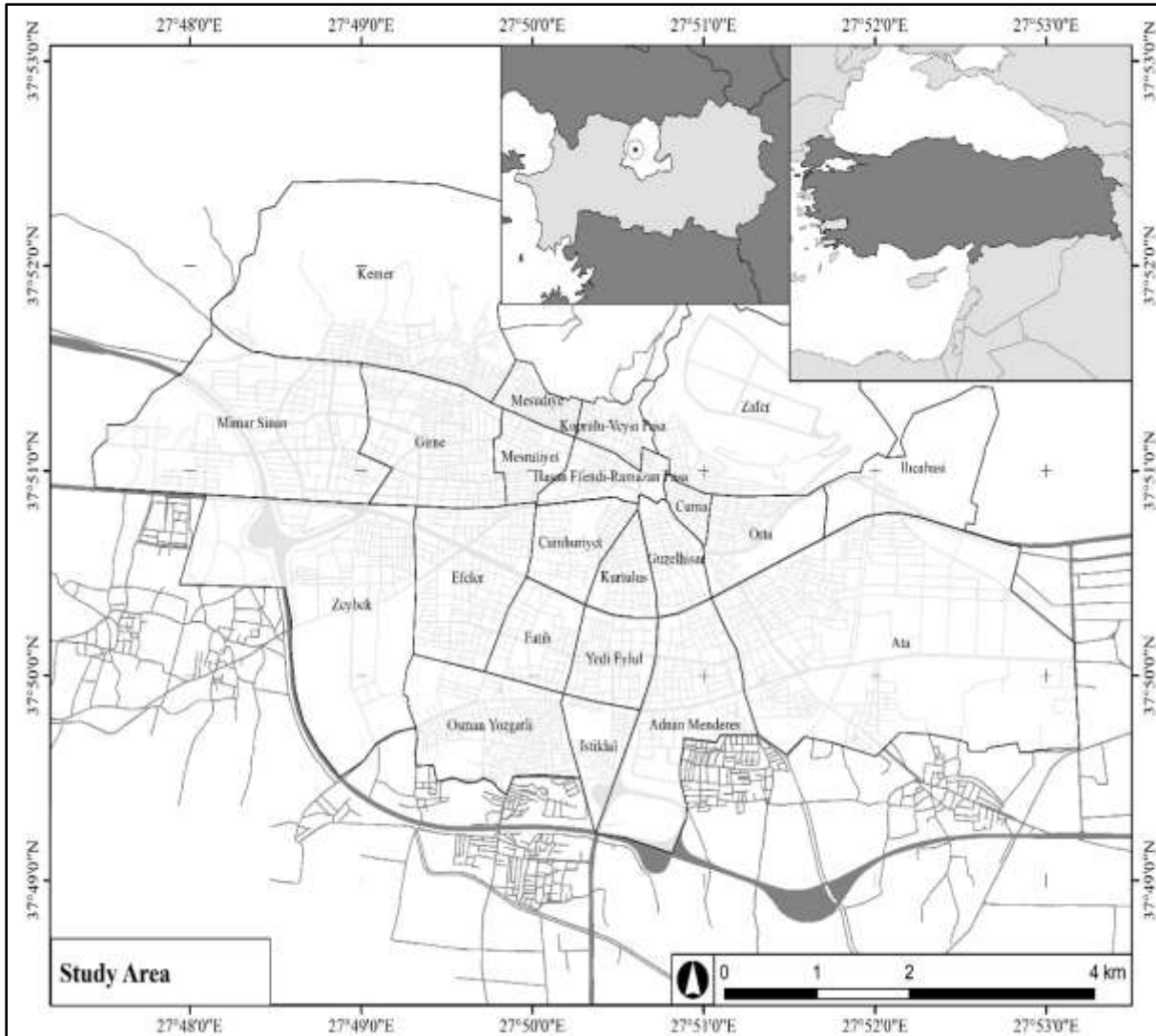


Figure 1:- Study area.

Statistical analysis

SPSS 25.0 statistical software package (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.) was used for the statistical analysis of the research data. The independent sample t-test was applied according to the responsible municipality, and the one-way analysis of variance (ANOVA) was applied according to socio-economic status.

Results:-

The study examined 197 parks in 23 neighborhoods in Efeler district center. Whereas 88.32% (174 parks) of the 197 parks are under the responsibility of T.R. Efeler Municipality, 11.68% (23 parks) are under the responsibility of Aydın Metropolitan Municipality. While the parks under the responsibility of T.R. Efeler Municipality are located in 20 neighborhoods, the parks under the responsibility of Aydın Metropolitan Municipality are located in 12 neighborhoods (Table 1).

Of the parks under the responsibility of Aydın Metropolitan Municipality, 4 are located in both Kemer and Mesudiye neighborhoods, 3 are located in Mimar Sinan neighborhood, and 2 are located in each of Efeler, Orta, and Zafer neighborhoods. Of the parks under the responsibility of T.R. Efeler Municipality, 30 are located in Efeler neighborhood, 24 are located in Girne neighborhood, and 18 are located in Mimar Sinan neighborhood. Considering

all parks, 32 are located in Efeler neighborhood, 24 in Girne neighborhood, and 21 in Mimar Sinan neighborhood (Table 1).

Table 1:- The neighborhoods and parks in the study area.

Income Status	Neighborhood	Parks (Number)		
		AMM	T.R. EM	AP
Middle	Adnan Menderes	1	-	1
Middle	Ata	1	-	1
Low	Cuma	1	6	7
Middle	Cumhuriyet	1	10	11
Low	Çeştepe	1	-	1
Middle	Efeler	2	30	32
Middle	Fatih	-	8	8
High	Girne	-	24	24
Middle	Güzelhisar	1	4	5
Middle	Hasan Efendi-Ramazan Paşa	-	3	3
Low	Ilıcabaşı	-	6	6
Middle	İstiklal	-	4	4
Middle	Kemer	4	11	15
Middle	Köprülü-Veysi Paşa	-	5	5
Middle	Kurtuluş	-	4	4
Middle	Mesudiye	-	2	2
Middle	Meşrutiyet	4	8	12
High	Mimar Sinan	3	18	21
Low	Orta	2	3	5
Low	Osman Yozgatlı	-	5	5
Middle	Yedi Eylül	-	11	11
Middle	Zafer	2	5	7
Middle	Zeybek	-	7	7
	Total	23	174	197
AMM: Aydın Metropolitan Municipality T.R. EM: Republic of Türkiye Efeler Municipality AP: All parks				

Whereas 95.65% (22 parks) under the responsibility of Aydın Metropolitan Municipality have “seating units,” 82.61% (19 parks) have “sports and fitness equipment,” and 56.52% (13 parks) have “children’s playgrounds,” only 8.70% (2 parks) of the parks have a “chess area” and 4.35% (1 park) have a “bicycle path” and a “skateboard track” (Table 2).

While 83.33% (145 parks) of the parks under the responsibility of T.R. Efeler Municipality have “seating units,” 61.49% (107 parks) have “children’s playgrounds,” and 43.10% (75 parks) have “sports and fitness equipment,” only 0.57% (1 park) of the parks have a “bicycle path.” No parks have a “skateboard track” and a “chess area” (Table 2).

Whereas 84.77% (167 parks) of all parks have “seating units,” 60.91% (120 parks) have “children’s playgrounds,” and 47.72% (94 parks) have “sports and fitness equipment,” only 1.02% (2 parks) have a “bicycle path” and a “chess area”, and 0.51% (1 park) has a “skateboard track” (Table 2).

Table 2:- The parks’ active and passive recreational opportunities according to responsibilities.

Responsibility	Neighborhood		Park		Sports field		Walking track		Bicycle path		Skateboard track		Sports Fitness & equipment		Children’s playground		Chess area		Seating unit	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%

AM M	12	5 2. 1 7	23	1 1. 6 8	5	1 7. 2 4	6	6 0	1	5 0	1	1 0 0	19	20.2 1	13	10. 83	2	1 0 0	22	1 3. 1 7
T.R. EM	20	8 6. 9 6	17 4	8 8. 3 2	24	8 2. 7 6	4	4 0	1	5 0	-	-	75	79.7 9	107	89. 17	-	-	14 5	8 6. 8 3
AP	23	1 0 0	19 7	1 0 0	29	1 0 0	10	1 0 0	2	1 0 0	1	1 0 0	94	100	120	100	2	1 0 0	16 7	1 0 0
%					21. 74		26. 09		4.3 5		4.3 5		82.6 1		56. 52		8.7 0		95. 65	
					13. 79		2.3 0		0.5 7		-		43.1 0		61. 49		-		83. 33	
					14. 72		5.0 8		1.0 2		0.5 1		47.7 2		60. 91		1.0 2		84. 77	
AMM: Aydın Metropolitan Municipality T.R. EM: Republic of Türkiye EfelerMunicipality AP: All parks																				

Each of Ata, Efeler, Meşrutiyet, Orta, and Zafer neighborhoods have one park with a “sports field” under the responsibility of Aydın Metropolitan Municipality. Six parks with a “sports field” under the responsibility of T.R. Efeler Municipality are located in Girne neighborhood, 5 parks are located in Efeler neighborhood, and 4 parks are located in Mimar Sinan neighborhood. Among all parks, 6 parks with a “sports field” are located in both Efeler and Girne neighborhoods, 4 parks are located in Mimar Sinan neighborhood, and 3 parks are located in Zeybek neighborhood (Table 3).

Among the parks under the responsibility of Aydın Metropolitan Municipality, the parks under the responsibility of T.R. Efeler Municipality, and all parks, 2, 2, and 4 parks, respectively, with a “walking track” are located in Mimar Sinan neighborhood (Table 3).

While a park with a “bicycle path” among the parks under the responsibility of Aydın Metropolitan Municipality is located in Kemer neighborhood, a park with a “bicycle path” under the responsibility of T.R. Efeler Municipality is located in Cumhuriyet neighborhood. Among all parks, one park with a “bicycle path” is located in Cumhuriyet and Kemer neighborhoods (Table 3).

A park with a “skateboard track” among the parks under the responsibility of Aydın Metropolitan Municipality is located in Orta neighborhood, but no parks under the responsibility of T.R. Efeler Municipality have a “skateboard track.” Among all parks, a park with a “skateboard track” is located in Orta neighborhood (Table 3).

Among the parks with “sports and fitness equipment” under the responsibility of Aydın Metropolitan Municipality, 3 are located in each of Kemer, Meşrutiyet, and Mimar Sinan neighborhoods, and 2 are located in both Efeler and Zafer neighborhoods. Of the parks with “sports and fitness equipment” under the responsibility of T.R. Efeler Municipality, 13 are located in Mimar Sinan neighborhood, 10 in Girne neighborhood, and 9 in Efeler neighborhood. Among all parks with “sports and fitness equipment,” 16 are located in Mimar Sinan neighborhood, 11 in Efeler neighborhood, and 10 in Girne neighborhood (Table 3).

Among the parks with a “children’s playground” under the responsibility of Aydın Metropolitan Municipality, 3 parks are located in Meşrutiyet neighborhood, and 2 are located in each of Kemer, Orta, and Zafer neighborhoods. Among the parks with a “children’s playground” under the responsibility of T.R. Efeler Municipality, 18 parks are located in both Efeler and Girne neighborhoods, 15 in Mimar Sinan neighborhood, and 7 parks are located in each of Kemer and Yedi Eylül neighborhoods. Among all parks with a “children’s playground,” 19 are located in Efeler neighborhood, 18 in Girne neighborhood, and 15 in Mimar Sinan neighborhood (Table 3).

While one park with a “chess area” under the responsibility of Aydın Metropolitan Municipality is located in Orta and Zafer neighborhoods, no parks under the responsibility of T.R. Efeler Municipality have a “chess area.” Among all parks, there is one “chess area” in the parks in Orta and Zafer neighborhoods (Table 3).

Among the parks with “seating units” under the responsibility of Aydın Metropolitan Municipality, 4 parks are located in Kemer and Meşrutiyet neighborhoods, 3 are located in Mimar Sinan neighborhood, and 2 parks are located in each of Efeler, Orta, and Zafer neighborhoods. Among the parks with “seating units” under the responsibility of T.R. Efeler Municipality, 23 are in Girne neighborhood, 22 are in Efeler neighborhood, and 16 are in Mimar Sinan neighborhood. Among all parks with “seating units,” there are 24 parks in Efeler neighborhood, 23 parks in Girne neighborhood, and 19 parks in Mimar Sinan neighborhood (Table 3).

Among the parks under the responsibility of T.R. Efeler Municipality and all parks, the highest number of parks with 5 different active and passive recreational facilities (Sports field, walking track, sports and fitness equipment, children’s playground, and seating unit) are located in Mimar Sinan neighborhood. Among the parks under the responsibility of T.R. Efeler Municipality and all parks, the highest number of parks with 4 different active and passive recreational facilities (Sports field, sports and fitness equipment, children’s playground, and seating unit) are in Efeler and Girne neighborhoods. Among the parks under the responsibility of Aydın Metropolitan Municipality, the highest number of parks with 3 different active and passive recreational facilities are in Kemer and Meşrutiyet neighborhoods (Sports and fitness equipment, children’s playground, and seating unit) and Mimar Sinan neighborhood (walking track, sports and fitness equipment, and seating unit) (Table 3).

Table 3:- The number of parks with active and passive recreational facilities according to responsibilities and the neighborhoods of their location.

	Sports field			Walking track			Bicycle path			Skateboard track			Sports & Fitness			Children’s			Chess area			Seating unit		
	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P	A M M	T R E M	A P
Adnan		-	0	1		1			0			0	1		1			0			0			0
Ata	1	-	1			0			0			0	1		1	1		1			0	1		1
Cuma			0			0			0			0	1		1	1	1	2			0	1	5	6
Cumhur		2	2		1	1		1	1			0	1	4	5	1	6	7			0	1	9	1
Çeştepe			0			0			0			0			0			0			0	1		1
Efeler	1	5	6			0			0			0	2	9	1	1	1	1			0	2	2	2
Fatih		1	1			0			0			0		5	5		6	6			0		7	7
Girne		6	6		1	1			0			0		1	1		1	1			0		2	2
Güzelhi			0			0			0			0	1	1	2		2	2			0	1	2	3
Hasan Efendi-			0			0			0			0		1	1		1	1			0		3	3
Ilıcabaş			0			0			0			0		2	2		2	2			0		2	2
İstiklal			0			0			0			0		1	1		4	4			0		2	2
Kemer			0	1		1	1		1			0	3	3	6	2	7	9			0	4	1	1
Köprülü			0			0			0			0		2	2		2	2			0		5	5
Kurtulu			0			0			0			0		3	3		3	3			0		3	3
Mesudi			0			0			0			0		2	2		2	2			0		2	2
Meşrutı	1	1	2	1		1			0			0	3	3	6	3	3	6			0	4	8	1
Mimar		4	4	2	2	4			0			0	3	1	1		1	1			0	3	1	1
Orta	1		1	1		1			0	1		1	1	1	2	2	1	3	1		1	2	2	4
Osman			0			0			0			0		1	1		1	1			0		4	4
Yedi		1	1			0			0			0		6	6		7	7			0		1	1
Zafer	1	1	2			0			0			0	2	3	5	2	3	5	1		1	2	5	7
Zeybek	-	3	3			0			0			0		5	5		5	5			0		4	4
Total	5	2	2	6	4	1	1	1	2	1	0	1	1	7	9	1	1	1	2	0	2	2	1	1

AMM: Aydın Metropolitan Municipality T.R. EM: Republic of Türkiye Efeler Municipality AP: All parks

Of the parks under the responsibility of Aydın Metropolitan Municipality, only 4.35% (1 park) has 6 active and passive recreational facilities, and 13.04% (3 parks) have only one active and passive recreational facility. Whereas

34.78% of the parks (8 parks) have 3 active and passive recreational facilities, there is no park under the responsibility of Aydın Metropolitan Municipality that does not have active and passive recreational facilities (Table 4).

Of the parks under the responsibility of T.R. Municipality, 0.57% (1 park) have 5 active and passive recreational facilities, and 21.26% (37 parks) have only one active and passive recreational facility. While 33.33% of the parks (58 parks) have 3 active and passive recreational facilities, 12.07% (21 parks) do not have any active and passive recreational facilities (Table 4).

Table 4:- The number of parks according to responsibilities and the number of active and passive recreational facilities.

	Number of Activities	Number of Parks	
		Number	%
AMM	0	0	0
	1	3	13.04
	2	4	17.39
	3	8	34.78
	4	7	30.43
	5	0	0
	6	1	4.35
	Total	23	100
T.R. EM	0	21	12.07
	1	37	21.26
	2	44	25.29
	3	58	33.33
	4	13	7.47
	5	1	0.57
	6	0	0
	Total	174	100

AMM: Aydın Metropolitan Municipality T.R. EM: Republic of Türkiye Efeler Municipality

Of the parks under the responsibility of Aydın Metropolitan Municipality, Tekstil Park in Orta neighborhood has 6 active and passive recreational facilities. Of the parks under the responsibility of Aydın Metropolitan Municipality, parks with one active and passive recreational facility are Çeştepe kent meydanı in Çeştepe neighborhood, Nafiz Karabudak Park in Kemer neighborhood, and Kültür Sokak in Meşrutiyet neighborhood. Of the parks under the responsibility of T.R. Efeler Municipality, the only park with 5 active and passive recreational facilities is Şehit Fırat Lokmacı Park in Girne neighborhood.

Figure 2 shows how the number of activities in parks in Aydın is distributed by their socio-economic status and responsible municipalities. The ANOVA test did not indicate a significant difference in the number of activities between the neighborhoods according to socio-economic status ($p > 0.05$). Parks in neighborhoods with middle socio-economic status ($M=2.36$, $SD=1.16$) had the highest average number of activities compared to parks in neighborhoods with low ($M=2.05$, $SD=1.17$) and high ($M=2.01$, $SD=1.03$) socio-economic status. The t-test indicated a significant difference in the number of activities between the parks under the responsibility of Aydın Metropolitan Municipality ($M=3.00$, $SD=1.21$) and the parks under the responsibility of T.R. Efeler Municipality ($M=2.03$, $SD=1.18$) ($p < 0.001$). The parks under the responsibility of Aydın Metropolitan Municipality had the highest average number of activities at all socio-economic levels.

Conclusions:-

The distribution and presence of active recreational opportunities are integral components of urban public health interventions aiming to correct the negative impacts of sedentary lifestyles (Dahmann et al., 2010).

Whereas most (88.32%/174 parks) of the parks (197 parks) examined in the study are under the responsibility of T.R. Efeler Municipality, few parks (11.68%/23 parks) are under the responsibility of Aydın Metropolitan Municipality.

While Kemer and Meşrutiyet neighborhoods have the highest number of parks (4 parks) under the responsibility of Aydın Metropolitan Municipality, Efeler neighborhood has the highest number of parks under the responsibility of T.R. Efeler Municipality and all parks (30 and 32 parks, respectively). Mimar Sinan neighborhood has the highest number of parks under the responsibility of Aydın Metropolitan Municipality, under the responsibility of T.R. Efeler Municipality, and all parks (3, 18, and 21 parks, respectively).

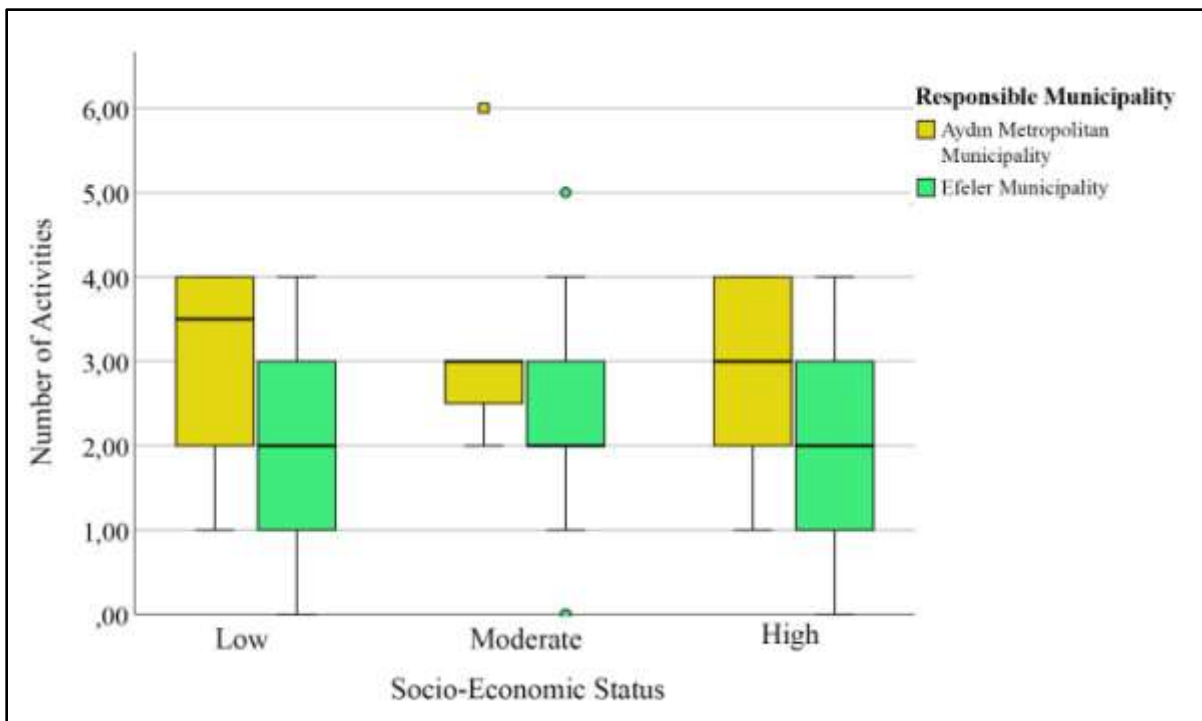


Figure 2:- The number of activities according to the socio-economic status [$F(2,195)=1.724$, $p=0.181$] and responsible municipalities [$t(196)=3.671$, $p=0.000$] of the neighborhoods in Aydın.

Almost all of the parks (95.65%/22 parks) under the responsibility of Aydın Metropolitan Municipality have “seating units,” a significant part of the parks under the responsibility of T.R. Efeler Municipality and all parks (83.33%/145 parks and 84.77%/167 parks, respectively) have “seating units.” Whereas most parks under the responsibility of Aydın Metropolitan Municipality have “sports and fitness equipment” and “children’s playgrounds” (82.61%/19 parks and 56.52%/13 parks, respectively), a significant part of the parks under the responsibility of T.R. Efeler Municipality and all parks (61.49%/107 parks and 60.91%/120 parks, respectively) have a “children’s playground.” A very small part of the parks under the responsibility of Aydın Metropolitan Municipality, the parks under the responsibility of T.R. Efeler Municipality, and all parks (4.35%/1 park, 0.57%/1 park, and 1.02%/2 parks, respectively) have a “bicycle path.” There is a “chess area” and a “skateboard track” in a very small part of the parks under the responsibility of Aydın Metropolitan Municipality (8.70%/2 parks and 4.35%/1 park, respectively) and all parks (1.02%/2 parks and 0.51%/1 park, respectively).

Girne neighborhood has the highest number of parks (6 parks in each of the two categories) with a “sports field” among the parks under the responsibility of T.R. Efeler Municipality and all parks. Efeler neighborhood is the other neighborhood with the highest number of parks (6 parks) with a “sports field” among all parks.

Mimar Sinan neighborhood is the only neighborhood with the highest number of parks (2, 2, and 4 parks, respectively) with a “walking track” among the parks under the responsibility of Aydın Metropolitan Municipality, the parks under the responsibility of T.R. Efeler Municipality, and all parks.

Kemer neighborhood has a park (1 park) with a “bicycle path” among the parks under the responsibility of Aydın Metropolitan Municipality, and Cumhuriyet neighborhood has a park (1 park) with a “bicycle path” among the parks under the responsibility of T.R. Efeler Municipality.

Orta neighborhood is the neighborhood where the only park with a “skateboard track” among the parks under the responsibility of Aydın Metropolitan Municipality and all parks is situated. There is no “skateboard track” in any of the parks under the responsibility of T.R. Efeler Municipality.

Mimar Sinan neighborhood has the highest number of parks (3, 13, and 16 parks, respectively) with “sports and fitness equipment” among the parks under the responsibility of Aydın Metropolitan Municipality, the parks under the responsibility of T.R. Efeler Municipality, and all parks.

Efeler neighborhood has the highest number of parks (18 and 19 parks, respectively) with a “children’s playground” among the parks under the responsibility of T.R. Efeler Municipality and all parks.

Each of Orta and Zafer neighborhoods has one park with a “chess area” among the parks under the responsibility of Aydın Metropolitan Municipality. There is no “chess area” in any of the parks under the responsibility of T.R. Efeler Municipality.

Efeler neighborhood has the highest number of parks (22 and 24 parks, respectively) with “seating units” among the parks under the responsibility of T.R. Efeler Municipality and all parks.

Mimar Sinan neighborhood has the highest number of parks with the highest number (5) of active and passive recreational facilities (Sports field, walking track, sports and fitness equipment, children’s playground, and seating unit) among the parks under the responsibility of T.R. Efeler Municipality and all parks. Mimar Sinan neighborhood also has the highest number of parks with 3 active and passive recreational facilities (walking track, sports and fitness equipment, and seating unit) among the parks under the responsibility of Aydın Metropolitan Municipality.

Whereas only one of the parks under the responsibility of Aydın Metropolitan Municipality has 6 active and passive recreational facilities at the lowest rate of 4.35%, 8 parks have 3 active and passive recreational facilities at the highest rate of 34.78%. All parks under the responsibility of Aydın Metropolitan Municipality have active and passive recreational facilities.

While only one park under the responsibility of T.R. Efeler Municipality has 5 active and passive recreational facilities at the lowest rate of 0.57%, 58 have 3 active and passive recreational facilities at the highest rate of 33.33%. Twenty-one parks have no active or passive recreational facilities at a rate of 12.07%.

Tekstil Park in Orta neighborhood is the only park with the highest number of active and passive recreational facilities (6) among the parks under the responsibility of Aydın Metropolitan Municipality.

Şehit Fırat Lokmacı Park in Girne neighborhood is the only park with the highest number of active and passive recreational facilities (5) among the parks under the responsibility of T.R. Efeler Municipality.

Recommendations:-

A well-designed recreation program makes a city more lively and attractive (Çay, 2015). In this regard, both Aydın Metropolitan Municipality and Efeler Municipality should develop a recreation program for the city of Aydın. Active and/or passive recreation areas needed in each neighborhood should be planned within this program.

The risk of chronic diseases, including cardiovascular diseases and diabetes, can be reduced in people who actively engage in physical activity (Siti Nur Afiqah et al., 2015; Masana et al., 2017; Gadais et al., 2018; Ling et al., 2018). It is essential to increase active recreational opportunities for creating a healthy society. Activities should be created in parks without active recreational opportunities in Efeler district center, and the number of activities should be increased in other parks. Aydın Metropolitan Municipality and T.R. Efeler Municipality should plan a “bicycle path” and a “skateboard track” in the parks under their responsibility. A “skateboard track” should be planned in the parks under the responsibility of Aydın Metropolitan Municipality and T.R. Efeler Municipality, especially in high-income Girne and Mimar Sinan neighborhoods. The number of “sports fields” should be increased in the parks under the responsibility of Aydın Metropolitan Municipality, and the number of “walking tracks” should be increased in the parks under the responsibility of Aydın Metropolitan Municipality and T.R. Efeler Municipality.

Whereas active and passive recreation refer to different types of activities, both types of activities can be effectively co-located (U.S. Environmental Protection Agency, 2003).

Engagement in active activities in parks should be encouraged by enhancing parks' physical and social aspects (Ling et al., 2021).

References:-

1. Ayar, H., Ayyıldız Durhan, T., Karaküçük, S. (2021). The Relationship between Environmental Attitude and Environmentally Friendly Recreational Behaviors in Participation in Park Recreation Activities. *European Journal of Education Studies*, 8(5), ISSN: 2501 – 1111, ISSN-L: 2501 – 1111.
2. Çay, R.D. (2015). Recreation and Urban Park Management, Chapter 21, Editors: R. Efe, C. Bizzarri, İ. Cürebal & G. N. Nyusupova, *Environment and Ecology at the Beginning of 21st Century*, St. Kliment Ohridski University Press, 302-312.
3. Dahmann, N., Wolch, J., Joassart-Marcelli, P., Reynolds, K., Jerrett, M. (2010). The active city? Disparities in Provision of Urban Public Recreation Resources. *Health & Place*, 16(3), 431-445.
4. Gadais, T., Boulanger, M., Trudeau, F., Rivard, M.C. (2018). Environments Favorable to Healthy Lifestyles: A Systematic Review of Initiatives in Canada. *Journal of Sport and Health Science*, 7(1), 7-18.
5. Govardhan Narkhede, P., Dharia, S. (2018). Recreational Spaces for Elderly People. *Journal of the Indian Institute of Architects*, 8-13.
6. Gowda, K. Sridhara, M.V. (2008). Planning and Management of Parks and Green Areas the Case of Bangalore Metropolitan Area. *Management of Environmental Quality: An International Journal*, 19(3), 270-282.
7. Haider, J., Aeschbacher, P., Bose, M., Rivera, D. (2013). Active Living in Small Town America: An Approach to Parks and Recreation Planning and Design. *Studies in the History of Gardens & Designed Landscapes*, 33(4), 345-359.
8. Kinczel, A., Maklári, G., Müller, A. (2020). Recreational Activities and Motivation Among Young People. *GeoSport for Society*, 12(1), 53-65, DOI 10.30892/gss.1206-059
9. Lawal, D.U., Matori, A.N., Balogun, A.L. (2011). Geographic Information System and Multi-Criteria Decision Analysis in Proposing New Recreational Park Sites in Universiti Teknologi Malaysia. *Modern Applied Science*, 5(3), 39-55.
10. Ling, O.H.L., Nur Hidayah, S., Marlyana, A.M., Sharifah Zannierah, S.M. (2018). Healthy lifestyle of Urban Residents. Case study: Sri Pahang Public Housing, Bangsar, Kuala Lumpur, Malaysia. *Planning Malaysia*, 16(3), 1-12.
11. Ling, O.H.L., NazurahSalehudin, S., Marlyana A.M., Kwong, Q.J. (2021). The Quality of Life among Visitors of Recreational parks: A Case Study of Recreational Parks in Temerloh Town, Pahang, Malaysia. *GEOGRAFIA Onlinetm Malaysian Journal of Society and Space*, 17 (1), 94-106.
12. Lynch, K. (2007). Neighbourhood Parks in Saskatoon: Contributions to Perceptions of Quality of Life. A Thesis Submitted to the College of Graduate Studies and Research in Partial Fulfillment of the Requirements for the Degree of Master of Arts in the Department of Geography, University of Saskatchewan Saskatoon, Saskatchewan, Canada, April 2007.
13. Masana, L., Ros, E., Sudano, I., Angoulvant, D. (2017). Is There a Role for Lifestyle Changes in Cardiovascular Prevention? What, When and How? *Atherosclerosis Supplements*, 26, 2-15.
14. Sadeghi, Z., Haghighat Bin, M. (2023). Enhancing Recreational Activities Through Planting Design in Neighborhood Parks. *Journal of Outdoor Recreation and Tourism* 42, 100591
15. Sani, M.U., Olaosebikan, B.T. (2018). Influence of Recreational Activities on Physical, Emotional and Social Well-Being among Students of Federal University Dutsin-Ma, Katsina State, Nigeria. *Journal of Physical Education Research*, 5(3), 51-54.
16. Siti Nur Afiah, M.M., Ling, O.H.L., Dasimah, O., & Subramaniam, K. (2015). Theoretical Review on Environmental Health in Relation to Neighbourhood Planning and Human Physical Activity. *Procedia – Social and Behavioral Sciences*, 201, 325-332.
17. Solecki, W.D., Welch, J.M. (1995). Urban Parks: Green Spaces or Green Walls? *Landscape and Urban Planning* 32(2), 93-106.
18. Stein, T.V., Denny, C.B., Pennisi, L.A. (2003). Using Visitors' Motivations to Provide Learning Opportunities at Water-based Recreation Areas. *Journal of Sustainable Tourism*, 11(5), 404-425.
19. Tongpong, N. (2015). Design Guidelines for Recreation Area of Romklao Kallapruek Park in Khon Kaen University. *International (Humanities, Social Sciences and arts)*, 8(4), 162-172.

20. U.S. Environmental Protection Agency, (2003). Meeting Community Needs, Protecting Human Health and the Environment: Active and Passive Recreational Opportunities at Abandoned Mine Lands
21. Woolley, H. (2003). Urban Open Spaces, Chapter One: Social Benefits and Opportunities. Spon Press, 11 New Fetter Lane, London EC4P 4EE
22. Zaytsev V.P., Manucharjan S.V., Prusik Kr., Prusik K., Cieslicka M., Szark-Eckardt M., (2013). Methodology of Physical Recreation: Problems, Experience, Recommendations. Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports, 17(4), 13-20.