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Socio-Psychological Effects of Urban Green Areas: Case of Kirklareli City Center

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ABSTRACT

Urban open green spaces have an important role in today's health problems and the necessity for urban health to create green areas that have high accessibility for all citizens. Acceleration of urbanization in recent decades decays balance of green areas and impervious surfaces in cities because of rent seeking society. The main problem associated with adequate provision of green area and fair access for residents. According to the "Spatial Planning Policy Framework" the green area per capita in urban area (10 m²), Kırklareli doesn't provide green space per capita. The aim of the study is to identify the socio-psychological effects of the green areas in the Kirklareli. The objectives of the study is to determine the correlation between socio-psychological criteria with green space accessibility, per capita and visiting time and to discuss the findings rationale. The following hypothesis was proposed "urban green areas on inhabitants have positive effects on human health, quality of life and stress". In this context, a survey was conducted to analyze the socio-psychological effects of urban green spaces in Kirklareli. The expected outcome of the study is that green areas are associated with positive emotions, green space per capita and accessibility that can assist to decrease inequalities in health.

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1. Introduction

Historically, from the beginning of the 20th century, there has been an awareness of the importance of green space in urban planning (Verheij et al., 2008). However, the population growth rates have been increasing exponentially, natural and semi-natural areas (agriculture, pasture, forest and urban green areas) are under pressure in urban fringe (Angel MartÍNez-GonzÁLez et al., 2001). As a result of this situation, green space per capita and accessibility to urban green space decrease, therefore the presence of open and green areas is needed more than ever before. Due to the adverse effects of the decline in the areal size of urban green space in the urban areas, studies on the effects of green areas on urban health have started to be carried out (Cicea & PÎRlogea, 2011).

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Today, physical inactivity has become a global health problem that the World Health Organization emphasizes as a risk factor. Although lifestyles vary from region to region, in some countries the rate of inactivity is about 80%. However, regular physical activity is associated with heart disease, diabetes, breast-cancer risk, mental health and quality of life. For that reason, it is vital that all nations should provide the opportunity of safe and accessible environments to be physically active in their daily lives in order to improve their personal and social health to ensure their social, economic and cultural development. In this context, the world health organization has identified the draft global vision for 2018-2030 as "more active people for a healthier world". One of the action plans to achieve this goal has been identified as strengthening the access chances of all individuals of all ages to high quality public and open green areas, recreation areas, sports facilities (World Health Organization, 2018). Urban green areas are considered as the main environment providing opportunities for various physical activities for cities (Koohsari et al., 2015).

In the zoning regulation, green areas are defined as green spaces that include the playpen, playground, resting, walking, picnic and recreational areas, which are reserved for society to benefit (Çevre ve Şehircilik Bakanlığından, 2017). The urban green and open areas are designed in a certain hierarchy according to their variety and qualities. These can be listed as; children's playground, small scale neighborhood unit park, neighborhood and urban parks, regional parks and national parks. The neighborhood parks could have children's playgrounds, parks, sports areas and passive green space activities (Ersoy, 2015). Urban open and green areas should be accessible to pedestrians at neighborhood and subscales (Aydemir, 2004; Ersoy, 2015). The areal size should be suitable for their intended use, and they should be ergonomic, safe, aesthetic and accessible to all layers of society, (Aydemir, 2004). The level of physical activity, asphalt roads, playgrounds (Kaczynski et al., 2008), woodland areas, water elements (Kaczynski et al., 2008; Schipperijn et al., 2013), lighting, walking and cycling routes, bicycle parking, beautiful landscape, the size of the green area (Schipperijn et al., 2013), safety (Maas et al., 2009). Studies on the positive effects of open and green areas on individuals gain importance (Angel MartÍNez-GonzÁLez et al., 2001). The quality of life in cities mostly depends on the availability of attractive and accessible green areas. There is a common consensus on the necessity of urban green areas for the health and happiness of individuals (Cicea & PÎRlogea, 2011).

Green area and health have a positive relationship (Ersoy, 2015; Maas et al., 2009). Studies have pointed out that the relation between green areas and human health affects the quality of life and stress-reduction. The use of green areas contributes positively to coping with stress and green areas play a key role in designing healthy environments in cities. In the last thirty years, it has been exposed that the healing effect of urban green areas has been found in terms of public health and it has been observed that there is a positive correlation to decline stress and mental exhaustion between how often individuals use green areas and how much time they spend in green areas (Grahn & Stigsdotter, 2003; Nielsen & Hansen, 2007; Stigsdotter et al., 2010).

In general, the benefits of green areas;

Socially; provides social interaction (Aydemir, 2004; Cicea & PÎRlogea, 2011; Ersoy, 2015; Maas et al., 2009; Oktay, 1998; Verheij et al., 2008), opportunity to meet with nature (Kremer et al., 2016), physical activity (Verheij et al., 2008), promotes public health (Cicea & PÎRlogea, 2011; Ersoy, 2015), stress-reducement (Cicea & PÎRlogea, 2011; Ersoy, 2015; Honold et al., 2015; Kaplan, 2001; Verheij et al., 2008), prevents from depression (Bratman et al., 2015), helps to get rid of fatigue (Verheij et al., 2008), aesthetic to the built environment (Aydemir, 2004; Cicea & PÎRlogea, 2011), activities for recreation and entertainment and the chance to escape the city life (Aydemir, 2004).

Moreover, it has many ecological benefits. These benefits include oxygen production, dust and bacteriological treatment of the atmosphere (Cicea & PÎRlogea, 2011; Ersoy, 2015), reduction of gases causing air pollution (Ersoy, 2015), shading areas, noise reduction (Cicea & PÎRlogea, 2011), climatic control (Aydemir, 2004; Cicea & PÎRlogea, 2011; Oktay, 1998; Shishegar, 2014), preservation and maintenance of local vegetation (Aydemir, 2004; Cicea & PÎRlogea, 2011; Oktay, 1998), and regulation of ecosystem services (Roberts et al., 2018; Shishegar, 2014).

Green areas add economic identity to the city (Aydemir, 2004; Cicea & PÎRlogea, 2011), attracts investment, increases the value of urban space and housing (Cicea & PÎRlogea, 2011), makes positive contributions such as attracting tourists (Aydemir, 2004; Cicea & PÎRlogea, 2011). The interaction between man and nature is beneficial for the health and happiness of individuals (Fuller & Gaston, 2009; Roberts et al., 2018). Being in natural environments positively affects blood pressure, cholesterol and stress reduction, and has a positive specific relationship with mental health and cardiovascular diseases (Bedimo-Rung et al., 2005). Interaction with nature can take place by watching a natural landscape or by being in a natural environment (Huynh et al., 2013). Urban

green areas in cities have many benefits in terms of health (Alcock et al., 2014; Fuller & Gaston, 2009; Lee & Maheswaran, 2011; Roberts et al., 2018; Soga & Gaston, 2016) and well-being (Fuller & Gaston, 2009; Roberts et al., 2018; Soga & Gaston, 2016), and it is found that living in a close proximity to the green area has a reducing effect on the heart and respiratory diseases (Tamosiunas et al., 2014; Villeneuve et al., 2012) and there is a positive relationship between the higher level of physical activity (Cohen et al., 2007; Toftager et al., 2011) and the frequency of green areas usage (Akpinar, 2014; Cohen et al., 2007; Nielsen & Hansen, 2007). The potential benefits from open green areas are becoming vital in cities where green areas are threatened by urbanisation (Dallimer et al., 2011).

There are various evidence that areal size of green space near residential area is clearly correlated with physical activity (Bancroft et al., 2015; Paquet et al., 2013) among individuals with low stress levels (Fan et al., 2011), mental health (Gascon et al., 2015; Van den Berg et al., 2015) happiness, and general health (Maas et al., 2006; Verheij et al., 2008). The areal size of green space also has a positive influence on loneliness, social support, especially for children, the elderly and individuals with low level of economic status (Maas et al., 2009). There is a positive link between how often the green areas are visited, how much time is spent and the healing/decrease of stress and depression symptoms (Bedimo-Rung et al., 2005).

It is determined that there was a direct relationship with the green area in terms of quality of life and health (Grahn & Stigsdotter, 2003; Nielsen & Hansen, 2007; Stigsdotter et al., 2010). People living in the green area more than 1 kilometer closeness use open and green areas to do exercises less than the individuals living in the green area less than 300 meters (Toftager et al., 2011). It is determined that the individuals who have accessibility to green areas within a radius of 1-3 kilometers feel healthier compared to individuals living far away from green areas (Maas et al., 2006; Verheij et al., 2008). Spatial planning regulation states that urban open and green spaces such as playgrounds, sports areas, and urban parks should be planned within the service area of 500 meters, which is an accessible unit for pedestrians (Çevre ve Şehircilik Bakanlığından, 2014).

%92 of the total population lives in urban areas according to the Turkish Statistical Institution data of 2018. Therefore, urban areas have a dense population which lead destructive pressure on urban green areas throughout the cities. This study aims to determine the socio-psychological effects of the functions and areal size of open green areas in Kirklareli, and to discuss the current status after the spatial analysis. In other words, the functional uses of the green areas and their spatial qualification were measured in Kırklareli. In the considerations of urban open and green areas, although the open and green area standard in the current zoning legislation green area per capita should be 10 m², it was calculated in the present settlement areas in Kırklareli are less than 10 m² and the green areas are not sufficient and qualified in terms of size and reinforcement. In this context, the aim of this study is to analyze the possible psychosocial consequences and to develop socio-spatial approaches.

In this context, the following correlations were examined;

- the proximity and the visiting time in the green area
- the frequency of green space usage and mood
- satisfaction of size of green area and the frequency of green area usage and visiting time

The following hypotheses were tested.

- The frequency of use and spending time rises as the areal size of the green area increases
- Emotionally positive feelings rise as the time spending increases

User profiles and needs of these urban green areas were defined by the survey study. Spatial analyses were conducted and spatial suggestions were developed to increase the use of green areas in the city center by considering user satisfaction and needs.

2. Study Area

Kirklareli Province is located in transition area of the southern Thrace Region of Turkey. The province has borders with Bulgaria to the north, Black Sea to the east, Istanbul to the southeast, Tekirdag to the south and Edirne to the west (Figure 1). It has a land area of 6550 km² with an altitude of 203 meters above the sea level, a continental climate system and a total population of 351 684 (TURKSTAT, 2016). Kırklareli city center, which is chosen as the study area, is located in the central part of Kırklareli province between 41 ° 50 'North Latitudes and 27 ° 20' East Longitude (Figure 1). The amount of build up area in 2018 is about 868 hectares.

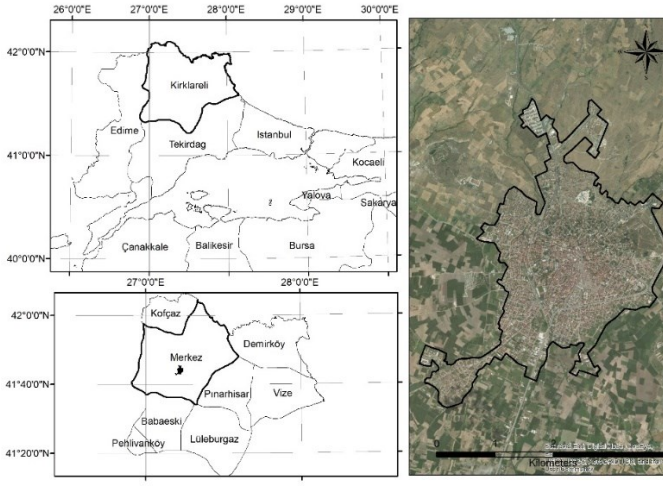


Figure 1. Location Map of Study Area.

Kirklareli Central District has a populated by 79 093 people according to 2018 census data. The population of the central district has been growing steadily since 1965 (Figure 2).

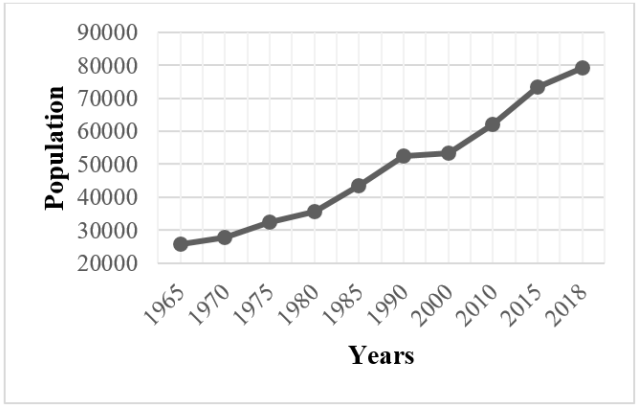


Figure 2. Population Growth by Years.

Total open and green areas were determined as 64.705 hectares within the built-up areas in Kırklareli city center of 2018. The distribution of these areas in urban space is shown in Figures 3 and 4. Urban green and open areas compromised; the city's parks, squares, district sports areas, children's playgrounds and active open and green areas available to public use as specified in the spatial plans production regulation. The amount of open and green areas per capita was calculated as 0.8 m^2. In this respect, it is seen that open and green areas per capita are 10 m^2 which is specified in the same regulation.

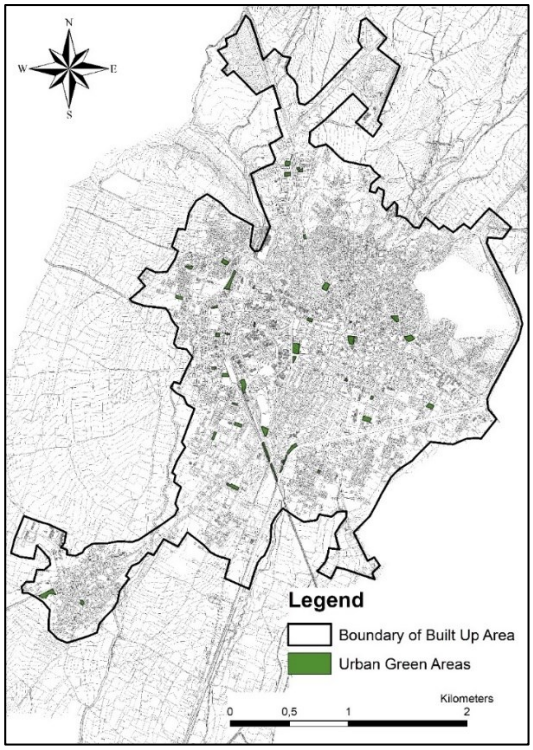


Figure 3. Urban Green Areas.

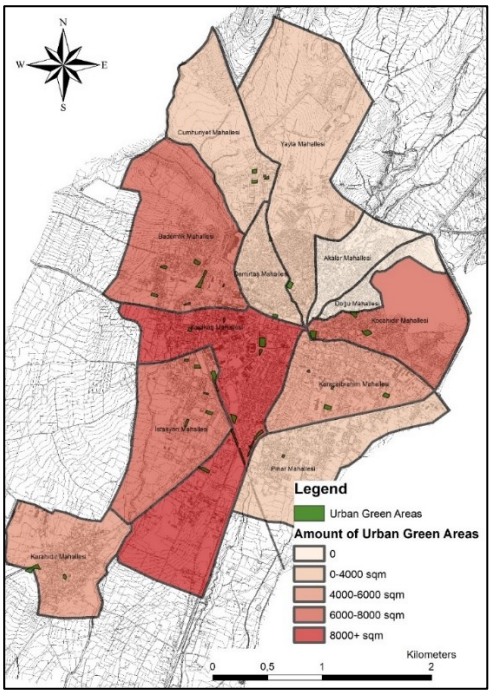
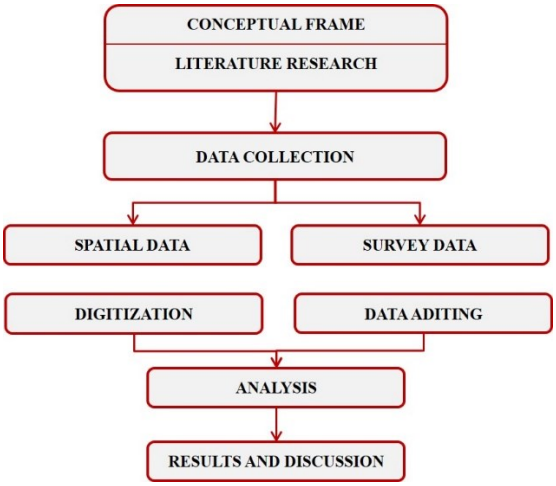


Figure 4. Amount of Urban Green Areas by Neigbourhood.

3. Method

The study consists of three sections; literature study, survey application and spatial analysis (Figure 5). In the conceptual framework of the study, the literature has been extensively investigated. As a result of this study, survey questions were prepared. Frequency, crosstab and Pearson Correlation analyses were applied to the survey questions. The flowchart of the study is shown below.



Figurel 5. Flowchart of the study.

3.1 Survey Application

A survey was conducted to define the socio-psychological effects of urban green areas and user satisfaction. The population of Kırklareli city center is 77226 in 2017 based on Turkey Statistical Institute (TSI) Address Based Population Registration System Data (ABPRS). Accordingly, the distribution of population and number of surveys by neighborhoods is as follows (Table 1). A total of 770 surveys were applied in 4% sample size and 95% confidence level (Table 1, App. 1). The number of surveys to be conducted in neighborhoods was determined in proportion of population.

Table 1: Kırklareli City Center Neighborhood Population and Number of Surveys Applied in the Scope of the Study.

#	Neighbourhood	2017 – Population Data	Number of Surveys	%
1	Akalar	3802	36	5
2	Bademlik	6987	66	9
3	Cumhuriyet	3539	35	5
4	Demirtaş	3589	36	5
5	Doğu	1292	18	2
6	İstasyon	10111	98	13
7	Karacaibrahim	12151	118	15
8	Karahıdır	2278	18	2
9	Karakaş	16510	185	24
10	Kocahıdır	4762	46	6
11	Pınar	5988	57	7
12	Yayla	6217	57	7
Total		**77226**	**770**	**100**

The highest and lowest survey percentages in the neighborhoods are Karakas with 24% of surveys, Karacaibrahim with 15% of surveys and Dogu and Karahidir with 2% (Figure 6).

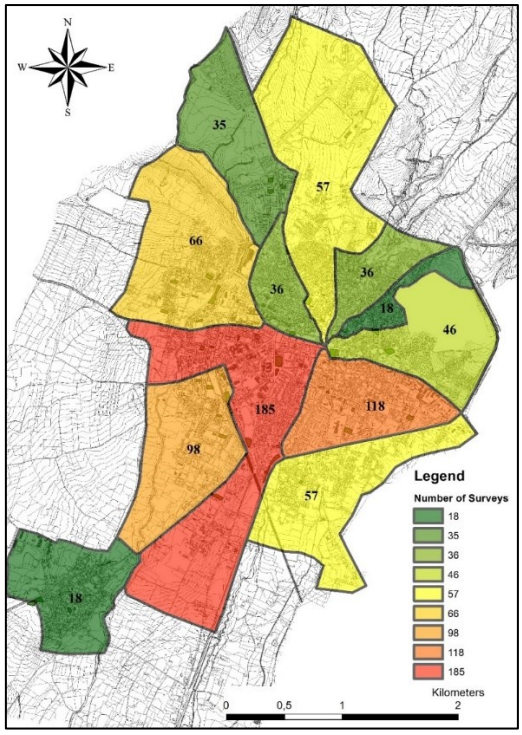


Figure 6. Number of Surveys per Neigbourhood.

The questions were prepared within the scope of the study were grouped into three main categories, in accordance with the literature review presented in the previous chapters. In the first category, questions were intended for evaluating users' profile. In the second category, questions were inquired about the duration of the existing park use, the purposes of use, the demands for close proximity to the parks and the factors affecting the positive/negative effects of the park use. In the third category, questions comprised health problems and emotions. The questions in the survey were generally arranged on a closed-ended and triple Likert scale. According to the answers given to the survey about health problems, participants with mental disorders were the main focus group of the study. The other participants were evaluated as control group.

The responses of the main group and the control group were evaluated in frequency and Pearson correlation analysis. Pearson Correlation analysis is a method of statistical evaluation used to examine the strength of a relationship between two, numerically measured, continuous variables. Pearson Product Moment correlation coefficient (abbreviated as p in text) is the measurement of correlation and ranges (depending on the correlation) between +1 and -1. +1 indicates the strongest positive correlation possible, and -1 indicates the strongest negative correlation possible (for the correlation coefficients between 0.00 and 0.25 means "too weak", the value between 0.26 and 0.49 means "weak", the value between 0.50 and 0.69 means "medium", between 0.70 and 0.89 the value means "high" and the

value between 0,90 and 1,00 means "too high"). But only correlations that are significant at sigf < 0.05 or 0.01 should be considered (abbreviated as sigf in text) (Zaid, 2015)

3.2 Spatial Analysis

In the study, GIS and Remote Sensing technologies were used for spatial representation of green areas. Aerial photographs have a significant place in urban planning and are an important tool for meeting the changing economic, social and recreational needs of the society and for monitoring urban development. In order to get fast and accurate results in physical planning studies, it is necessary to use aerial photographs frequently. Therefore, as a quick method and providing reliable information, aerial photographs lead to interpretations for the future in various disciplines.

In this context, satellite images of 2015, obtained from the General Directorate of Mapping, were rectified according to the relevant external orientation parameters and made available for operation (Fig. 7). These maps were digitized for analyzing green areas distribution in the city. As a result of this qualitative and qualitative inquiries made about the use of urban green spaces and related spatial formation processes. Survey data were entered into the GIS environment and spatial representations were made.

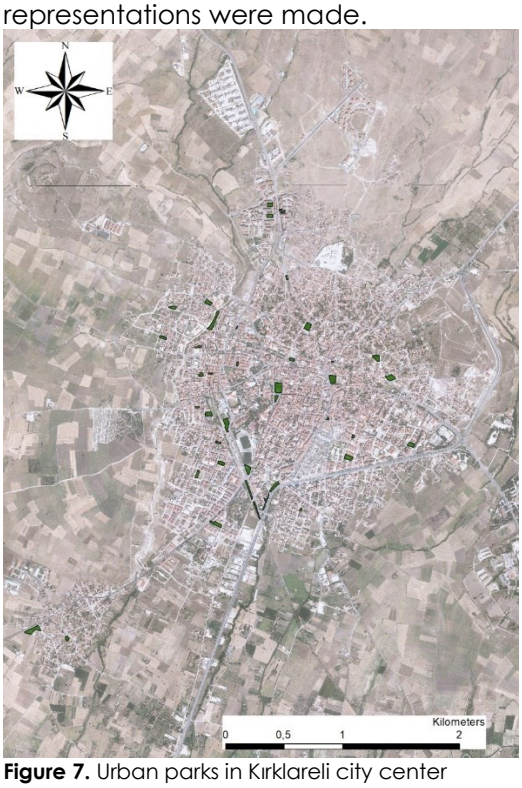


Figure 7. Urban parks in Kırklareli city center

4. Results and Reviews

Survey undercovered the current mood of the users, the mood in the park and the present health problems were determined.196 people responded positively to the question of whether they had a health problem (See App-1, Question no: 36) (Table 2, Figure 8).

Table 2. Frequency Analysis of Survey

Disease	Frequency	Ratio (%)
Tension	6	3
Respiratory	57	29
Psychological	**31**	**16**
Orthopedic	51	26
Internal	36	18
Others	15	8
Total	**196**	**100**

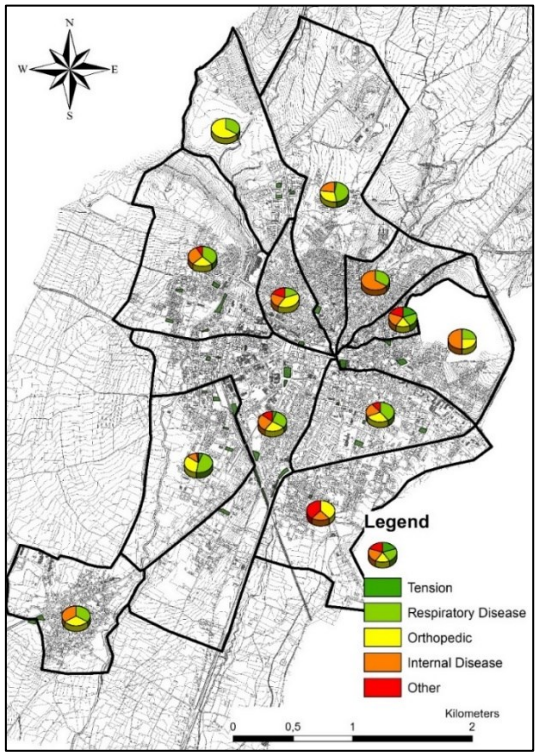


Figure 8. Disease reates by Neigbourhood

According to the survey data, users (31 persons) who stated that they had psychological disorder were identified as the main group to determine the user profile, user satisfaction and socio-psychological effects of the parks and the other users defined as the control group (739 persons). In the following sections, the results will be reported in detail in the frequency tables, cross-tables and correlation evaluations.

In the study, user satisfaction and socio-psychological parameters, frequency analysis were obtained and correlation tests were applied to measure the relationship strength between the factors affecting the user satisfaction and socio-psychological change. (App-1). According to this; In terms of user profile;

- The main and the control group is between the ages of 18-64 and has the education at the secondary and higher

education level. The mean age of main group is lower than the control group.

In terms of user satisfaction;

- The main group predominantly lives in Karacaibrahim (25,8%), Karakas (22,6%) and Yayla (19,6%) Neighborhoods.
- The main group can access the urban parks in the city by 5-10 minutes walking time. In the correlation test, there is a high positive relationship between the distance to the nearest green area and the time spending in the park (sigf: 0.000, p: 0.683).
- In the control group, it is seen that this distance is up to 15 minutes. In the correlation test, there is a positive relationship between the proximity to the nearest green area and the time spending in the park (sigf: 0.000, p: 0.577).
- There is a negative low-level relationship (sigf: 0.000, p: -0.275) among the responses given that distance to the nearest green area or accessibility are positively impacted on park use.
- The intended use of parks for the main group is limited to recreational activities. On the other hand, it was seen that there was a multilayered use in recreational, social and sports activities for the control group. The main explanations for the usage of urban open and green areas are social activity in the Karahıdır neighborhood and recreation in other neighborhoods. The proximity of the parks is among the last reasons for usage (Figure 9).

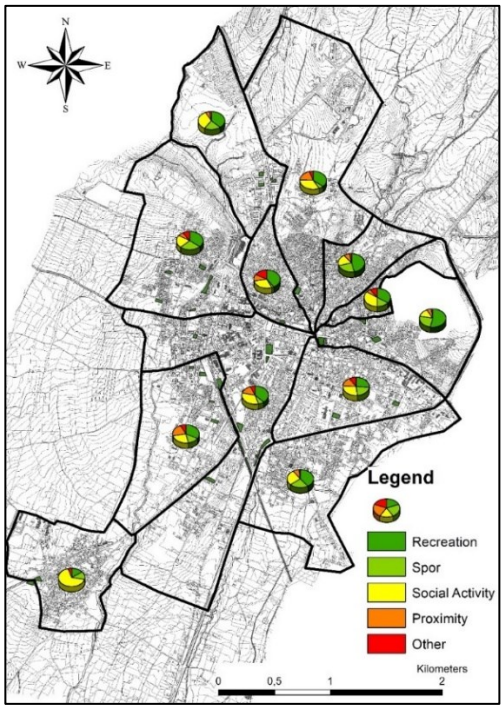


Figure 9. Urban Green Areas Usage.

- The usage frequency of urban open and green areas becomes more prominent once a week and more than once a week in all neighborhoods of the city. Daily park visiting is quite low throughout the city (Figure 10-11).
- The main group spends time in parks once a month or several times a week. However, control group visits parks several times a week. Similarly, the main group usually uses parks for less than 15 minutes, while the control group spends 15-30 minutes. In the correlation test, it is seen that the main group have a positive relationship between visiting time in the park and the accessibility, which is negatively affected by the park use (sigf: 0.027, p: -0.411). In the control group, there is a negative low-level relationship (sigf: 0.000, p: -0.284) between the time spending in the park and the positive effect of accessibility to the parks.
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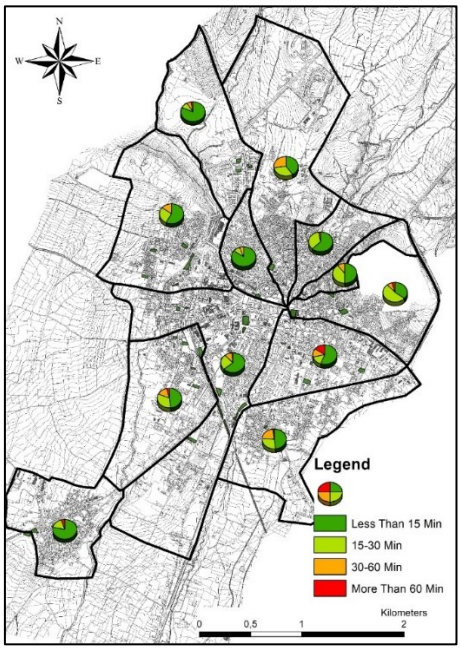

Figure 10. Duration of Urban Green Space Usage.

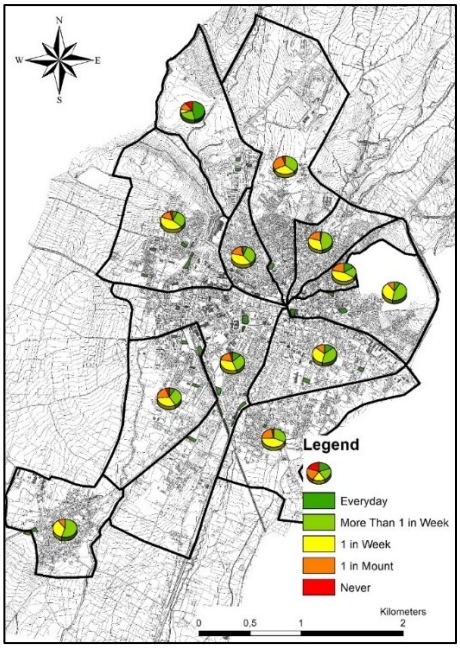

Figure 11. Urban Green Space Usage.

- Both groups choose the same equipment such as buffet and food and beverage units which positively affect the use of the parks, the main group differently consider lighting and insecurity which negatively affect the use of the parks. In the correlation test, it is seen that there is a high level of negative relationship (sigf: 0.000, p: -0.688) between the time spent in the park and the lack of night lighting. In the control group, the changes in the user profile of the evening are seen as the main criterion.
- When the cross-examination table (Table 3) was observed for the change between the current feeling and feeling in the park;
- In both groups, the users, who stated that they are depressed, tired and stressed in the last period, specified that they are happy, calm and peaceful in the park. In addition, the correlation test was performed for the main group, there was a positive, medium level relationship (sigf: 0.02, p: 0.410) between feeling in the park and landscape elements that positively affect the use of parking.

Table 2: Cross-Table in Main Group and Control Group for Current Feelings and Feelings in the Park.

Main group							
Mood	**Feeling In The Park**						**Total**
	Energetic	**Tired**	**Happy**	**Depressed**	**Calm and Peaceful**	**Stressed**	
Energetic	1	0	1	0	0	0	2
Tired	1	1	1	1	5	0	9
Happy	1	0	1	0	0	0	2
Depressed	0	1	3	1	3	0	8
Calm and Peaceful	0	0	1	1	2	0	4
Stressed	1	0	0	0	4	1	6
Total	4	2	7	3	14	1	31
Control group							
Mood	**Feeling In The Park**						**Total**
	Energetic	**Tired**	**Happy**	**Depressed**	**Calm and Peaceful**	**Stressed**	
Energetic	54	4	21	4	56	5	144
Tired	38	13	33	11	107	1	203
Happy	26	10	38	5	64	3	146
Depressed	6	4	12	8	25	5	60
Calm and Peaceful	18	5	25	8	52	6	114
Stressed	8	3	7	7	28	6	59
Total	150	39	136	43	332	26	726

3. Conclusion

One of the main parameters of equality is accessibility to open green spaces that bring healthier communities. In other words, every inhabitant of a city has equal rights to utilize green space and to live a healthy life. Maintaining community green spaces enable health benefits for inhabitants such as resting, relieving stress, and other psychological effects that also decrease environmental and health inequalities by

supplying them equal opportunities to use and benefit from green spaces, such as preserving from air pollution and noise. Many studies have proved relations between green areas close to residential areas and health profits affirming that spending time in green space can affect health benefits regardless of the level of physical activity.

Planning, designing and managing open green spaces or network play superior roles to provide vital new chances for societies. Our study aimed to expose the correlations between the designing, planning, accessibility, mobility and well-being due to the open green space organization in Kırklareli. The study involves three parts; literature study, survey application and spatial analysis. Surveys signified that green space and health has a positive relationship and pointed out that green space affected human mental health and stress-reduction.

According to the survey and spatial analysis results, the green area per capita was calculated as 0,8 m² which is very low due to the planning zone regulation. On the other hand, according to the survey results, parks have a positive psychological effect on the urban users and parks could only offer recreational aim for users with mental disorders. Although all users spend a long time in parks and visit them frequently. There are common negative evaluations such as change of user profile at nights, lack of lighting, noise and pollution. In this respect, the literature framework of the study is constant with the presented information. In addition, the number and size of parks should be increased and spatial quality should be improved in order to improve urban health.

In this regard, although the parks provide supportive results for the users to have a psychologically positive effect on the users; it is possible to say that parks of Kırklareli have a simple usage characteristic especially for users with psychological problems and do not satisfy them for socialization and social activities. Despite the limited use of parks in terms of the duration and type of usage for users with mental disorders, it is seen that the factors such as accessibility, lighting and landscaping elements related to the parks are more sensitive than the control group and the correlation between those factors is medium and high level. In the control group, there is no similar sensitivity level and the relations are generally low level. Therefore, it is possible to say that the design interventions in parks can influence the users with psychological disorders in terms of socio-psychological aspects and usage profile.

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Conflict of interests

The authors declare no conflict of interest.

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Appendix 1: Survey Frequency Analysis Table for Main and Control Group.

Survey evaluation by other users			**Survey evauation by users that answered the "do you have any discomfort?" (see question 36) " as "psychological discomfort"**		
I. User Profile					
Age Groups	**Frequency**	**Percent (%)**	**Age Groups**	**Frequency**	**Percent (%)**
Young (0-17)	24	3.2	Young (0-17)	2	6.5
Adult (18-64)	*689*	*93.2*	*Adult (18-64)*	*28*	*90.3*
Elderly (65+)	26	3.5	Elderly (65+)	1	3.2
Total	739	100.0	Total	31	100.0
Minimum Age: 12			Minimum Age: 16		
Maximum Age: 85			Maximum Age: 67		
Average Age: 32			Average Age: 26		
Gender	**Frequency**	**Percent (%)**	**Gender**	**Frequency**	**Percent (%)**
Male	429	58.1	Male	23	74.2
Female	310	41.9	Female	8	25.8
Total	739	100.0	Total	31	100.0
Education Status	**Frequency**	**Percent (%)**	**Education Status**	**Frequency**	**Percent (%)**
Literate	101	13.7	Literate	2	6.5
Illiterate	25	3.4	Elementary school	7	22.6
Elementary school	109	14.7	*Secondary school*	*6*	*19.4*
Secondary school	*206*	*27.9*	*University*	*16*	*51.6*
University	*298*	*40.3*	Total	31	100.0
Total	739	100.0			
II. User Satisfaction					
Walking Time To Nearest Park	**Frequency**	**Percent (%)**	**Walking Time To Nearest Park**	**Frequency**	**Percent (%)**
5 minutes	*278*	*37.6*	*5 minutes*	*10*	*32.3*
6-10 minutes	*178*	*24.1*	*6-10 minutes*	*10*	*32.3*
11-15 minutes	*125*	*16.9*	11-15 minutes	4	12.9
16-20 minutes	86	11.6	16-20 minutes	2	6.5
20 minutes and more	71	9.6	20 minutes and more	5	16.1
Total	739	100.0	Total	31	100.0
Purpose of Park Usage	**Frequency**	**Percent (%)**	**Purpose of Park Usage**	**Frequency**	**Percent (%)**
Rekreation	*256*	*35.4*	*Recreation*	*17*	*54.8*
Spor	122	16.9	Spor	5	16.1
Social activities	*253*	*28.0*	*Social activities*	3	9.7
Closeness to the place where they live	88	12.2	Closeness to the place where they live	1	3.2
Socialization	50	6.9	Others	5	16.1
Others	5	.7	Total	31	100.0
Total	724	100.0			
Frequency of Park Usage	**Frequency**	**Percent (%)**	**Frequency of Park Usage**	**Frequency**	**Percent (%)**
Never	27	3.7	Never	1	3.2
Once in mount	127	17.3	Once in mount	*8*	*25.8*
Once in week	*261*	*35.6*	*Once in week*	7	22.6
More than one in week	*251*	*34.2*	*More than one in week*	*9*	*29.0*
Everyday	67	9.1	Everyday	6	19.4
Total	733	100.0	Total	31	100.0
Spending Time in a Park	**Frequency**	**Percent (%)**	**Spending Time in a Park**	**Frequency**	**Percent (%)**
15 minutes and less	*396*	*57.6*	*15 minutes and less*	*19*	*61.3*
15-30 minutes	*176*	*25.6*	15-30 minutes	6	19.4
30-60 minutes	87	12.6	30-60 minutes	4	12.9

60 minutes and more	29	4.2	60 minutes and more	2	6.5
Total	688	100.0	Total	31	100.0

II.I. Question 27. Do the following have a positive impact on the use of the nearby park / green area? (Prominent 3 answers)

Urban Furniture	**Frequency**	**Percent (%)**	**Accesibility**	**Frequency**	**Percent (%)**
Yes	311	42.1	Yes	15	48.4
No	428	57.9	No	16	51.6
Total	739	100.0	Total	31	100.0
Facilities	**Frequency**	**Percent (%)**	**Urban Furniture**	**Frequency**	**Percent (%)**
Yes	309	41.8	Yes	12	38.7
No	430	58.2	No	19	61.3
Total	739	100.0	Total	31	100.0
Landscape Elements	**Frequency**	**Percent (%)**	**Landscape Elements**	**Frequency**	**Percent (%)**
Yes	253	34.2	Yes	8	25.8
No	486	65.8	No	23	74.2
Total	739	100.0	Total	31	100.0

II.II. Question 28. Do the following have a negative impact on the use of the nearby park / green area? (Prominent 3 answers)

Pollution	**Frequency**	**Percent (%)**	**Pollution**	**Frequency**	**Percent (%)**
Yes	384	52.0	Yes	13	41.9
No	355	48.0	No	18	58.1
Total	739	100.0	Total	31	100.0
Noise	**Frequency**	**Percent (%)**	**Noies**	**Frequency**	**Percent (%)**
Yes	347	47.0	Yes	10	32.3
No	392	53.0	No	21	67.7
Total	739	100.0	Total	31	100.0
User Profile Change for Night Time	**Frequency**	**Percent (%)**	**Lack of Lighting in Evening / Insecurity (two different answers at the same rate)**	**Frequency**	**Percent (%)**
Yes	241	32.6	Yes	9	29.0
No	498	67.4	No	22	71.0
Total	739	100.0	Total	31	100.0

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