

Evaluating the Urban Quality of Life: A Study in an Urban Residential Environment in İstanbul, Türkiye

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ABSTRACT

The concept of quality of life is an approach that emerges by comparing and evaluating social values and life standards in order to measure the life standards of societies. The aim of this study is to reveal the changing preferences of the users with the changing life conditions, to approach the quality of life and user satisfaction studies from a different perspective, and to reveal the current situation in the neighborhood and mass housing scales by examining the relationship between the quality of life and open green spaces. A total of 768 surveys were conducted to determine the opinions and suggestions of the users in the selected residential spaces. The frequency analysis was used to evaluate the demographic characteristics. Correlation analysis was also used to determine the degree and direction of the relationship between the variables and the models were created. Since the research was carried out in two different samples and the comparison of the two samples constitutes the basic hypothesis of the research, the correlation analysis was conducted separately based on these samples. It was found that green spaces affect the quality of life in many ways such as environmental, recreational, health, and social factors. When neighborhood and mass housing are compared, it has been concluded that the levels of satisfaction, green spaces and social environment satisfaction, and awareness are higher in mass housing.

Keywords: İstanbul, mass housing, neighborhood, quality of life, user satisfaction

Introduction

The social indicators movement, which emerged in the 1930s with the measurement and evaluation of the living standards by American researchers, caused the development of the concept of quality of life. Societies' lifestyles have changed due to the increase in income opportunities and the diversification and needs that arise in meeting basic needs. The concept of quality of life has become a rapidly spreading and developing phenomenon in this development process.

The quality of life occurs under the influence of natural environmental conditions and is also shaped by all physical and social factors. Quality of life research seeks answers to questions such as whether social development is experienced, whether current studies and practices respond to the needs and expectations of the public, and whether investments can be efficiently evaluated (Diener & Suh, 1997). The concept of quality of life constantly renews itself as an active variable as long as the lives and living lives of societies continue. According to the studies, the concept of quality of life is a dynamic phenomenon that differs from person to person, according to the planned goal and criteria (Van Kamp et al., 2003).

Measuring and evaluating the quality of life in cities becomes clear by determining the limits of the concept of quality of life and selecting its indicators. It has been seen in recent studies that the emphasis has been placed on determining the characteristics and indicators of quality of life at the city, district, and neighborhood level (Liu, 1975, Dickesron, 1981, Connerly & Marans, 1988, Savageau & Loftus, 1997). The indicators used to measure the quality of life are examined in two separate categories as subjective and objective indicators. The objective indicators consist of numerical data, census results, and reports. Objective studies that show the data about the environments in which societies live their lives, establish living standards, perform recreational activities, and generally live in are objective indicators. On the other hand, subjective indicators are directly related to the living standards of individuals compared to objective indicators and include subjective evaluations. It is aimed to measure the personal values of individuals in their social life, business life, or home life. Furthermore, it is seen that the

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subjective quality of life is directly related to the various emotions that exist in life such as demand, expectation, and happiness, which constitute human psychology. In general, quality of life indicators are formed by collecting the individual's personal characteristics, values, and all environmental factors, such as usability level, cultural level, accessibility, education level, movement of the population, income level, open and green spaces, security comfort, sustainability, and livability.

The urban areas are complex places which contains open and green spaces with education, health, transportation, trade, and similar areas in terms of physical structures; moreover, it has social structures where people of different socio-economic, ethnic backgrounds, cultures, traditions and customs live/have to live together (Kart Aktaş & Çınar, 2018). The use of urban areas by communities in functions, such as urban infrastructure, communication, transportation, housing, and recreation reveals the concept of urban life quality. Urban quality of life interacts with changes in cultural, political, economic and social processes. Moreover, urban quality of life is a concept that was born with the social indicators movement, and it is still developing with the work of many professions such as architects and urban planners. In addition, it has been developed by nature researchers, landscape architects, and experts who have been trained in branches related to urbanization, environmental problems, and local governments. The concept of urban quality interacts with many different concepts such as quality of life, sustainability, and livability. From this point of view, urban quality of life is a concept that occurs depending on many variables.

Sustainability that emerges as a concept which embraces the meeting and maintenance of economic, environmental, physical and social needs without consuming the living conditions of future generations. In urban sustainability, the idea of creating a settlement that focuses on the goal of reducing the use of resources and solid wastes of the

city and increasing livability is dominant (WCED, 1987). Liveability is the concept that emerges when the standards of the place where the individual lives meet the expectations of the individual. Issues such as how urban users use the urban area, what kind of meanings they attribute, and how they experience it are very important in determining the identity and quality of an area (Kart Aktaş & Çınar, 2018). Urban livability varies depending on criteria, such as location, time, purpose, and working criteria. The concept of "livable city" was explained by some researchers with its population and size; moreover, it was associated with the form of administration where the people of the city could participate individually during the Greek civilization. The current meaning for the concept of livability generally focuses on meeting expectations about health, job opportunities, income status, good housing, schools, shopping and entertainment activities, accessibility, public areas, and community (Pacione, 2005; Newman & Kenworthy, 1999).

Material

Küçükçekmece District of İstanbul, Türkiye, has been chosen as the study area (Figure 1). Küçükçekmece District is on the European side and has a surface area of 37.75 km² and a circumference of 47.33 km (URL 1). In the study, Atakent and İstasyon neighborhoods were determined as sample areas.

Küçükçekmece is mentioned as the place where life began in Istanbul. While there were agricultural lands and dairies in Küçükçekmece in the 1940s, it started to receive immigration after the 1960s. Today, there are densely industrial facilities in Küçükçekmece District. There are many large factories, industrial-commercial sites, and approximately 10,000 industrial enterprises and workshops in the district.

The population density in Küçükçekmece District has increased noticeably since the 1990s with the development of the city and immigration.



Figure 1.
The Location of Küçükçekmece District (Produced from Google Earth).

In 2019, the total population of Küçükçekmece District was calculated as 792.821. The population density is 18.1 person/km². Considering the education level of Küçükçekmece District, it is seen that primary and high school graduates are in the majority. While the highest graduated school level is primary school, high school, and undergraduate; graduates from master's and doctoral schools are lower than others.

Considering the green spaces in Küçükçekmece District, there are numerous children's playgrounds. While sports fields and neighborhood parks are partially available, there are very few green spaces in the form of city parks.

Method

In this study, a questionnaire was conducted to measure standards and efficiency of green space use based on quality of life criteria. The surveys were conducted separately in the case of mass housing and neighborhood. The minimum number of people to be interviewed in the neighborhoods included in the study was calculated with the following formula (Orhunbilge, 2000; Daşdemir, 2016) regarding the sample size in limited communities:

$$n = \frac{N \times Z^2 \times p \times q}{N \times D^2 + Z^2 \times p \times q} \quad (1)$$

Here, n is the sample size, Z is confidence coefficient ($Z = 1.96$ for 95% confidence level), N is the major mass size ($N = 14,804,116$), p is probability of the feature to be measured in the main mass, q is the probability that the selected feature is not found in the main mass ($p = .5$; $q = .5$ is taken), and D is the accepted sampling error (0.05 was taken). For 2019, when the population of Atakent is 98.807 (TÜİK, 2019) and the population of İstasyon Mahallesi is 40.475 (TÜİK, 2019), the sample size according to the following formula is:

$$n = \frac{N \times 1.96^2 \times 0.5 \times 0.5}{N \times 0.05^2 + 1.96^2 \times 0.5 \times 0.5} \Rightarrow n \cong 384 \quad (2)$$

According to this formula, the n value was calculated as 384 and it was determined that at least this number of people should be interviewed. The survey study was carried out between October 2018 and January 2019, and the people to be interviewed/to be surveyed were determined according to the completely random sampling method in the selected neighborhoods in Küçükçekmece District. Considering the population density of Küçükçekmece District, a total of 768 surveys were conducted at the same time, 384 in Atakent District and 384 in İstasyon District. The Statistical Package for Social Sciences version 22 (IBM Corp.; Armonk, NY, USA) program was used to evaluate the data obtained from the surveys conducted with the inhabitants of the region.

The questionnaire forms included questions about the demographic characteristics of the participants, questions about their satisfaction in the region they live in (satisfaction with housing, satisfaction from social environment, satisfaction from parks, etc.), and questions they can choose more than one option (ways of using the park, disturbing factors in the green space, etc.). Demographic characteristics were examined with descriptive statistics, including organizing, summarizing, and displaying data in an informative form. In this context, the frequency and percentage distributions which show the demographic characteristics of the participants were evaluated.

Within the scope of the study, correlation analysis was also used to determine the degree and direction of the relationship between the variables. The relationship between the variables (such as satisfaction with housing, frequency of park usage) measured with an intermittent scale was analyzed with correlation analysis and the models were created in line with the literature. Since the research was carried out in two different samples and the comparison of the two samples constitutes the basic hypothesis of the research, the correlation analysis was conducted disjointedly based on these samples.

Findings

Frequency Analysis

Frequency analysis data were evaluated under the headings of quality criteria, transportation, and socioeconomic structure. In the questionnaire form applied within the scope of the research, there are two different question types in which the participants should choose one option and can choose more than one option. In this context, frequency analyses are expressed as percentages in single-choice questions, while data in multi-choice question graphs are shown as the total number of indications of the said expression. Demographic information such as gender, age, education, occupational distribution, income status, ownership status showing the socioeconomic structure of the participants in the study were asked within the scope of the survey. Findings of the mass housing and neighborhood samples are as shown in Table 1.

Whereas 73.1% of the participants in the mass housing sample are women, 26.9% are men, in the neighborhood sample, the rate of women is 64.3% and the rate of men is 35.7%. When the whole study is considered, 68.7% of the participants are women and 31.3% are men. In addition, the age distribution of the people participated in the survey was examined and found that the age distributions of both the samples were similar. When the educational status of the participants was considered, it is seen that the education level of the mass housing sample is higher than the neighborhood sample. When the whole study is examined, the largest segments respectively are found as high school graduates with 34.9%, undergraduate and graduate graduates with 33.8%, and primary education graduates with 25.2%, respectively. The rate of literate people is 5.2%, while the rate of illiterate people is 0.9%. The professions of the participants were also asked and according to the answers, 36.6% of the participants were housewives, 17.8% were workers, 8% were civil servants, 8.4% were self-employed, 7.2% were tradesmen, and 4.6% of them stated that they are retired. Considering the income distribution, it is seen that the income level of the mass housing sample is higher than the neighborhood sample.

Correlation Analysis

Correlation analysis was carried out to determine the linear relationship in the hypotheses, which is aiming to test the effect of the independent variable on the dependent variable, and to test the suitability of the data for the regression analysis. After then, regression analysis was performed for variables whose linear relationship was confirmed by the correlation coefficient.

The Relationship Between Satisfaction Levels

In the mass housing sample, there is a positive significant relationship between all the variables of housing environment, park features, parks, social environment, accessibility, and reasons for moving to home (Table 2). It is observed that as the level of satisfaction increases in each of these areas, the satisfaction in other areas also increases. When the

Table 1.
Socioeconomic Structure

		Mass Housing		Neighborhood		Total	
		Number	%	Number	%	Number	%
Gender	Women	261	73.1%	231	64.3%	492	68.7%
	Men	96	26.9%	128	35.7%	224	31.3%
Age	15–18	3	.8%	0	0.0%	3	.4%
	19–25	15	4.1%	15	4.2%	30	4.1%
	26–40	234	64.5%	243	67.5%	477	66.0%
	41–60	109	30.0%	98	27.2%	207	28.6%
	61+	2	.6%	4	1.1%	6	.8%
Education	Illiterate	2	.6%	5	1.3%	7	.9%
	Primary education	40	11.1%	146	38.8%	186	25.2%
	University	173	47.9%	50	13.3%	223	30.3%
	Literate	15	4.2%	23	6.1%	38	5.2%
	High school	108	29.9%	149	39.6%	257	34.9%
	Master/PhD	23	6.4%	3	.8%	26	3.5%
Profession	Worker	46	12.7%	85	22.5%	131	17.8%
	Retired	12	3.3%	22	5.8%	34	4.6%
	Housewife	113	31.3%	157	41.6%	270	36.6%
	Unemployed	4	1.1%	2	.5%	6	.8%
	Other	76	21.1%	39	10.3%	115	15.6%
	Officer	40	11.1%	19	5.0%	59	8.0%
	Self-employment	36	10.0%	26	6.9%	62	8.4%
	Artisan	27	7.5%	26	6.9%	53	7.2%
	Student	7	1.9%	1	.3%	8	1.1%
Workplace in the district	Yes	112	36.7%	141	50.0%	253	43.1%
	No	193	63.3%	141	50.0%	334	56.9%
Income status	1000–3000 TL	43	12.9%	208	58.9%	251	36.5%
	3000–5000 TL	118	35.3%	105	29.7%	223	32.5%
	5000–7000 TL	94	28.1%	27	7.6%	121	17.6%
	7000 TL and above	79	23.7%	13	3.7%	92	13.4%
Duration of living in Istanbul	0–5 years	24	6.6%	29	7.7%	53	7.2%
	6–10 years	20	5.5%	39	10.4%	59	8.0%
	11–15 years	47	12.9%	54	14.4%	101	13.7%
	16–20 years	47	12.9%	48	12.8%	95	12.9%
	20 years and above	225	62.0%	205	54.7%	430	58.3%
Duration of living in the district	0–5 years	82	22.8%	72	19.0%	154	20.9%
	6–10 years	114	31.7%	78	20.6%	192	26.0%
	11–15 years	81	22.5%	71	18.8%	152	20.6%
	16–20 years	30	8.3%	53	14.0%	83	11.2%
	20–30 years	31	8.6%	57	15.1%	88	11.9%
	30 years and above	22	6.1%	47	12.4%	69	9.3%

(Continued)

Table 1.
Socioeconomic Structure (Continued)

		Mass Housing		Neighborhood		Total	
		Number	%	Number	%	Number	%
Duration of living in the current house	0–5 years	150	41.4%	132	35.4%	282	38.4%
	6–10 years	116	32.0%	97	26.0%	213	29.0%
	11–15 years	68	18.8%	54	14.5%	122	16.6%
	16–20 years	16	4.4%	40	10.7%	56	7.6%
	20–30 years	10	2.8%	31	8.3%	41	5.6%
	30 years and above	2	.6%	19	5.1%	21	2.9%
Ownership status	Own property	179	56.8%	179	48.2%	358	52.2%
	Rent	125	39.7%	149	40.2%	274	39.9%
	Other	11	3.5%	43	11.6%	54	7.9%
Residential type	Apartment	0	0.0%	277	74.3%	277	74.3%
	Detached house	0	0.0%	71	19.0%	71	19.0%
	Slum house	0	0.0%	9	2.4%	9	2.4%
	Other	0	0.0%	16	4.3%	16	4.3%

expressions directed to the participants in the neighborhood survey are evaluated, it is seen that there is a negative significant relationship between satisfaction with park features, parks, housing and social environments, and neighborhood dissatisfaction (Table 3). In other words, as the level of satisfaction with park features, parks, and social environment increases, dissatisfaction with the neighborhood decreases.

The Relationships between Use of Green Space: Neighborhood Concept and Social Environment

The relationship between the frequency of green space use of the participants and their frequency of meeting with their neighbors and their perceptions of their social environment was examined. In the mass housing sample, as the use of green spaces of the participants increases,

Table 2.
The Relationship Between the Satisfaction Levels in Mass Housing Sample

Correlations							
Mass Housing Sample		*(1)	((2)	((3)	((4)	((5)	((6)
Satisfaction with housing environment (1)	Pearson Cor.	1	.516**	.499**	.328**	.379**	.323**
	Significance (two-tailed)		.000	.000	.000	.000	.000
	N	345	334	327	330	327	335
Satisfaction from park features (2)	Pearson Cor.	.516**	1	.549**	.275**	.382**	.349**
	Significance (two-tailed)	.000		.000	.000	.000	.000
	N	334	366	351	352	345	356
Satisfaction from parks (3)	Pearson Cor.	.499**	.549**	1	.324**	.368**	.376**
	Significance (two-tailed)	.000	.000		.000	.000	.000
	N	327	351	360	354	343	351
Social environment satisfaction (4)	Pearson Cor.	.328**	.275**	.324**	1	.332**	.326**
	Significance (two-tailed)	.000	.000	.000		.000	.000
	N	330	352	354	361	345	353
Accessibility (5)	Pearson Cor.	.379**	.382**	.368**	.332**	1	.492**
	Significance (two-tailed)	.000	.000	.000	.000		.000
	N	327	345	343	345	355	347
The reasons for moving house (6)	Pearson Cor.	.323**	.349**	.376**	.326**	.492**	1
	Significance (two-tailed)	.000	.000	.000	.000	.000	
	N	335	356	351	353	347	367

**Correlation is significant at the .01 level (two-tailed).

Table 3.
The Relationship Between the Satisfaction Levels in Neighborhood Sample

Correlations		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Neighborhood Sample								
Satisfaction with housing environment (1)	Pearson Cor.	1	.579**	.627**	.499**	.375**	.387**	-.212**
	Significance (two-tailed)		.000	.000	.000	.000	.000	.000
	N	330	320	323	320	312	315	317
Satisfaction from park features (2)	Pearson Cor.	.579**	1	.644**	.410**	.411**	.393**	-.159**
	Significance (two-tailed)	.000		.000	.000	.000	.000	.003
	N	320	352	346	339	331	330	336
Satisfaction from parks (3)	Pearson Cor.	.627**	.644**	1	.378**	.362**	.370**	-.244**
	Significance (two-tailed)	.000	.000		.000	.000	.000	.000
	N	323	346	365	350	343	342	346
Social environment satisfaction (4)	Pearson Cor.	.499**	.410**	.378**	1	.367**	.272**	-.169**
	Significance (two-tailed)	.000	.000	.000		.000	.000	.002
	N	320	339	350	359	342	340	346
Accessibility (5)	Pearson Cor.	.375**	.411**	.362**	.367**	1	.375**	.095
	Significance (two-tailed)	.000	.000	.000	.000		.000	.076
	N	312	331	343	342	355	336	352
The reasons for moving house (6)	Pearson Cor.	.387**	.393**	.370**	.272**	.375**	1	.034
	Significance (two-tailed)	.000	.000	.000	.000	.000		.535
	N	315	330	342	340	336	355	338
Dissatisfaction with neighborhood (7)	Pearson Cor.	-.212**	-.159**	-.244**	-.169**	.095	.034	1
	Significance (two-tailed)	.000	.003	.000	.002	.076	.535	
	N	317	336	346	346	352	338	359

**Correlation is significant at the .01 level (two-tailed).

Table 4.
The Relationships Between Use of Green Space—The Concept of Neighborhood and Social Environment in the Mass Housing Sample

Correlations		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mass Housing sample								
Frequency of green space use (1)	Pearson Cor.	1	.193**	.311**	.269**	.291**	.308**	.364**
	Significance (two-tailed)		.000	.000	.000	.000	.000	.000
	N	374	355	353	347	346	345	355
The concept of neighborhood (2)	Pearson Cor.	.193**	1	.382**	.342**	.168**	.202**	.346**
	Significance (two-tailed)	.000		.000	.000	.002	.000	.000
	N	355	360	348	342	341	340	350
Social environment: People living here do a lot (3)	Pearson Cor.	.311**	.382**	1	.610**	.469**	.485**	.800**
	Significance (two-tailed)	.000	.000		.000	.000	.000	.000
	N	353	348	359	351	352	351	359
Social environment: The inhabitants have high commitment (4)	Pearson Cor.	.269**	.342**	.610**	1	.545**	.514**	.821**
	Significance (two-tailed)	.000	.000	.000		.000	.000	.000
	N	347	342	351	353	349	349	353
Social environment: I feel like I belong here (5)	Pearson Cor.	.291**	.168**	.469**	.545**	1	.580**	.812**
	Significance (two-tailed)	.000	.002	.000	.000		.000	.000
	N	346	341	352	349	352	348	352
Social environment: I trust in people here (6)	Pearson Cor.	.308**	.202**	.485**	.514**	.580**	1	.798**
	Significance (two-tailed)	.000	.000	.000	.000	.000		.000
	N	345	340	351	349	348	351	351
Social environment satisfaction (7)	Pearson Cor.	.364**	.346**	.800**	.821**	.812**	.798**	1
	Significance (two-tailed)	.000	.000	.000	.000	.000	.000	
	N	355	350	359	353	352	351	361

**Correlation is significant at the .01 level (two-tailed).

Table 5.
The Relationships Between Use of Green Space—The Concept of Neighborhood and Social Environment in the Neighborhood Sample

Correlations		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Neighborhood Sample								
Frequency of green space use (1)	Pearson Cor.	1	.072	.162**	.200**	.245**	.249**	.241**
	Significance (two-tailed)		.174	.003	.000	.000	.000	.000
	N	373	354	335	323	334	335	351
The concept of neighborhood (2)	Pearson Cor.	.072	1	.185**	.188**	.153**	.184**	.210**
	Significance (two-tailed)	.174		.001	.001	.005	.001	.000
	N	354	363	333	322	333	332	349
Social environment: People living here do a lot (3)	Pearson Cor.	.162**	.185**	1	.628**	.426**	.481**	.786**
	Significance (two-tailed)	.003	.001		.000	.000	.000	.000
	N	335	333	343	327	331	330	343
Social environment: The inhabitants have high commitment (4)	Pearson Cor.	.200**	.188**	.628**	1	.496**	.537**	.819**
	Significance (two-tailed)	.000	.001	.000		.000	.000	.000
	N	323	322	327	331	328	324	331
Social environment: I feel like I belong here (5)	Pearson Cor.	.245**	.153**	.426**	.496**	1	.569**	.801**
	Significance (two-tailed)	.000	.005	.000	.000		.000	.000
	N	334	333	331	328	342	333	342
Social environment: I trust in people here (6)	Pearson Cor.	.249**	.184**	.481**	.537**	.569**	1	.822**
	Significance (two-tailed)	.000	.001	.000	.000	.000		.000
	N	335	332	330	324	333	341	341
Social environment satisfaction (7)	Pearson Cor.	.241**	.210**	.786**	.819**	.801**	.822**	1
	Significance (two-tailed)	.000	.000	.000	.000	.000	.000	
	N	351	349	343	331	342	341	359

**Correlation is significant at the .01 level (two-tailed).

it is seen that the frequency of meeting with their neighbors and their positive attitudes toward their social environment significantly increase (Table 4). When we consider the neighborhood sample, it is seen that the frequency of green space usage is not related to the frequency of meeting participants' neighbors (Table 5). However, as the use of green spaces increases, it is observed that the positive perception of the social environment also increases in the neighborhood sample. When the mass housing and neighborhood samples are compared, it is understood that there is a higher level of positive relationship between the frequency of green space usage and the concept of neighborhood and positive perception of the social environment. In summary, the use of green spaces turns into a socialization factor for the people living in mass housing.

The Relationships between Income Level and Ease of Transportation, Accessibility, and Social Environment

The relationships between the income level of the participants and the ease of transportation, accessibility, and social environment satisfaction was examined. In the mass housing sample, there was a negative relationship between income level and ease of transportation, and a positive relationship between ease of transportation–accessibility and accessibility–social environment satisfaction pairs (Table 6). There was no relationship between income level and ease of transportation in the neighborhood sample. A positive and significant relationship was

found between ease of transportation–accessibility and accessibility–social environment satisfaction pairs (Table 7).

The Correlation Models

The Relationship Between Satisfaction Levels

In the scope of the study, the relationship between satisfaction levels of different topics was examined and positive relationships were found between variables (Table 8). A model was created based on the relationships which were found in the mass housing sample. According to this model, satisfaction with the park features has a positive relationship with the satisfaction with the parks and social environment. Satisfaction with parks, social environment satisfaction, and accessibility are positively associated with the reasons for moving to house (Figure 2). Finally, the reasons for moving to the house also show a positive relationship with the satisfaction of the housing environment.

In the neighborhood sample as well as the mass housing sample, a positive relationship was found between satisfaction levels; moreover, it was observed that the neighborhood dissatisfaction variable which was asked specifically for the neighborhood sample had a negative relationship (Table 9). In the model created on the basis of the correlations, the positive relationships were found between the satisfaction with the housing environment and satisfaction with the park features,

Table 6.
The Relationships Between Income Level and Ease of Transportation, Accessibility, and Social Environment in the Mass Housing Sample

Correlations					
Mass Housing Sample		(1)	(2)	(3)	(4)
Income level (1)	Pearson Cor.	1	-.116*	.104	.216**
	Significance (two-tailed)		.035	.061	.000
	N	334	333	326	318
Ease of transportation (2)	Pearson Cor.	-.116*	1	.466**	.066
	Significance (two-tailed)	.035		.000	.224
	N	333	362	352	344
Accessibility (3)	Pearson Cor.	.104	.466**	1	.332**
	Significance (two-tailed)	.061	.000		.000
	N	326	352	355	345
Social environment satisfaction (4)	Pearson Cor.	.216**	.066	.332**	1
	Significance (two-tailed)	.000	.224	.000	
	N	318	344	345	361

*Correlation is significant at the .05 level (two-tailed).
** Correlation is significant at the .01 level (two-tailed).

Table 7.
The Relationships Between Income Level and Ease of Transportation, Accessibility, and Social Environment in the Neighborhood Sample

Correlations					
Neighborhood Sample		(1)	(2)	(3)	(4)
Income level (1)	Pearson Cor.	1	.010	.018	.012
	Significance (two-tailed)		.849	.748	.829
	N	353	335	330	335
Ease of transportation (2)	Pearson Cor.	.010	1	.454**	.217**
	Significance (two-tailed)	.849		.000	.000
	N	335	363	350	344
Accessibility (3)	Pearson Cor.	.018	.454**	1	.367**
	Significance (two-tailed)	.748	.000		.000
	N	330	350	355	342
Social environment satisfaction (4)	Pearson Cor.	.012	.217**	.367**	1
	Significance (two-tailed)	.829	.000	.000	
	N	335	344	342	359

**Correlation is significant at the .01 level (two-tailed).

satisfaction with the parks and social environment satisfaction, accessibility, and reasons for moving to the house. On the other hand, the neighborhood dissatisfaction variable showed negative relationship with the said variables. All relationships are shown in Figure 3.

The models formed with the data of correlation analysis and the relationships were examined. The significance value is indicated in red to show the relationships found to be statistically significant in these models, and in case no relationship is found, the significance values are shown in black.

Use of Green Space: Neighborhood Concept and Social Environment Relationship

In the mass housing sample, a positive relationship was found between the frequency of green space use of the participants and their frequency of meeting with their neighbors and their positive attitudes toward their social environment (Table 10). A model was formed consistent with the obtained correlations. Thus, as the frequency of green space use increases, the concept of neighborhood develops, and this contributes the increase of social environmental satisfaction level (Figure 4).

Table 8.
The Relationship Between the Satisfaction Levels in the Mass Housing Sample

Mass Housing Sample					
Relationship	Type	Coefficient	Strength*	Significance (Two-Tailed)	Reliability
Satisfaction with housing environment—Reasons for moving to the house	+	.323	Weak relationship	.000	Very reliable
Satisfaction with park features—Satisfaction with parks	+	.549	Medium relationship	.000	Very reliable
Satisfaction with park features—Social environment satisfaction	+	.275	Weak relationship	.000	Very reliable
Satisfaction with park—Reasons for moving to the house	+	.376	Weak relationship	.000	Very reliable
Accessibility—Reasons for* moving to the house	+	.492	Weak relationship	.000	Very reliable
Social environment satisfaction—Reasons for moving to the house	+	.326	Weak relationship	.000	Very reliable

*According to the classification in the book *Correlation and Regression Analysis* by Kenan Köse.

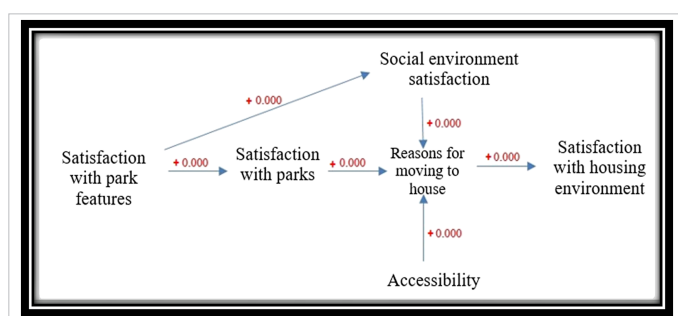


Figure 2.
The Relationship Model of the Satisfaction Levels in the Mass Housing Sample.

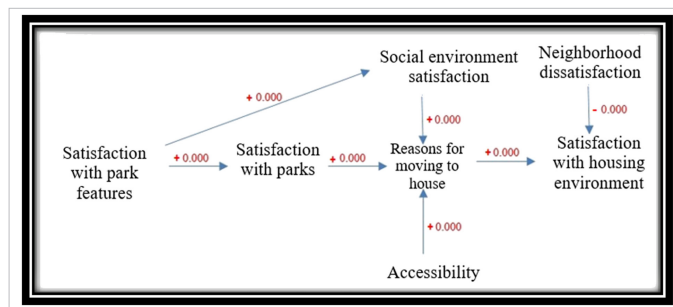


Figure 3.
The Relationship Model of the Satisfaction Levels in the Neighborhood Sample.

When the neighborhood sample was examined, no significant relationship was found between the frequency of green space usage and the concept of neighborhood (Table 11). A positive significant relationship was found between the participants' use of green spaces and their social environment satisfaction. In the model formed in line with the correlation found, it is seen in Figure 5 that the frequency of green

space use, and the concept of neighborhood positively affect social environment satisfaction. When the mass housing and neighborhood samples are compared, it is understood that the frequency of green space use does not affect neighborhood relations in the neighborhood sample, but it is a socialization factor for people living in mass housing.

Table 9.
The Relationships Between the Satisfaction Levels in the Neighborhood Sample

Neighborhood Sample					
The Relationships	Type	Coefficient	Strength*	Significance (Two-Tailed)	Reliability
Satisfaction with housing environment—Reasons for moving to the house	+	.387	Weak relationship	.000	Very reliable
Satisfaction with housing environment—Neighborhood dissatisfaction	-	-.212	Nonlinear inverse weak relationship	.000	Very reliable
Satisfaction with park features—Satisfaction with parks	+	.644	Medium relationship	.000	Very reliable
Satisfaction with park features—Social environment satisfaction	+	.410	Weak relationship	.000	Very reliable
Satisfaction with park—Reasons for moving to the house	+	.370	Weak relationship	.000	Very reliable
Accessibility—Reasons for moving to the house	+	.375	Weak relationship	.000	Very reliable
Social environment satisfaction—Reasons for moving to the house	+	.272	Weak relationship	.000	Very reliable

Table 10.
The Relationship Between Use of Green Space—Concept of Neighborhood and Social Environment Satisfaction in the Mass Housing Sample

Mass Housing Sample					
The Relationships	Type	Coefficient	Strength*	Significance (Two-Tailed)	Reliability
The frequency of green space use—The concept of neighborhood	+	.193	Very weak relationship	.000	Very reliable
The concept of neighborhood—Social environment satisfaction	+	.346	Weak relationship	.000	Very reliable
The frequency of green space use—Social environment satisfaction	+	.364	Weak relationship	.000	Very reliable

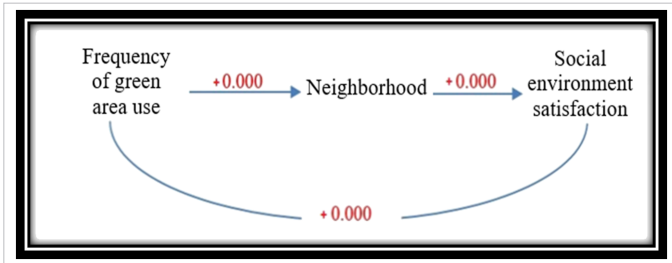


Figure 4.
The Relationship Model of Use of Green Space—the Concept of Neighborhood and Social Environment in the Mass Housing Sample.

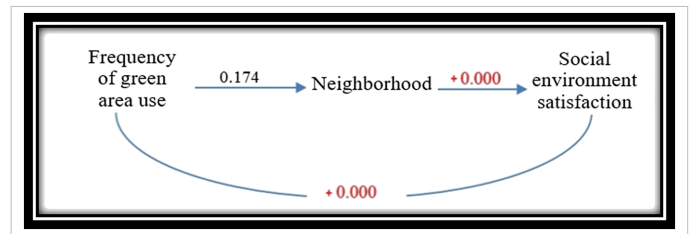


Figure 5.
The Relationship Model of Use of Green Space—the Concept of Neighborhood and Social Environment in the Neighborhood Sample.

Income Level and Ease of Transportation, Accessibility, and Social Environment Satisfaction Relationship

In the scope of the research, the relationship between the income level of the participants and the ease of transportation, accessibility, and social environment satisfaction was examined. In the model formed in line with the correlations obtained in the mass housing sample, it is understood that the perception of ease of transportation decreases as the income level increases (Table 12). It has been observed that the perception of accessibility increases as the perception of ease of transportation increases and this situation positively affects the social environment satisfaction with the income level (Figure 6).

It is seen that the income level does not affect the variable of “ease of transportation” and social environment satisfaction in the neighborhood sample (Table 13). Therefore, it was observed that ease of transportation increased the perception of accessibility and that both variables positively affect social environmental satisfaction in the created model (Figure 7).

Discussion and Conclusion

Open green spaces are social green spaces created for the public to perform recreational activities and to relax. Green spaces also contribute to making the environments formed by dense structures more balanced spaces. In addition, they play an effective role in meeting the needs of people and the social environment. Urban green spaces create more alive environments by breaking the hard structures of the building masses in cities. They contribute positively to human psychology by reducing the stress environment in cities and support the mutually established relationships to be healthier.

This study aims to research and analysis of the quality of life related to green spaces in mass housing and neighborhood scales in accordance with quality criteria. In this direction, correlation models which were created by the results from both samples and the interactions of factors affecting the quality of life were observed. The general condition of all criteria and how they are affected by the variables were evaluated in

Table 11.
The Relationship Between Use of Green Space—The Concept of Neighborhood and Social Environment in the Neighborhood Sample

Neighborhood Sample					
The Relationships	Type	Coefficient	Strength*	Significance (Two-Tailed)	Reliability
The frequency of green space use—The concept of neighborhood	+	.072	No relationship	.174	-
The frequency of green space use—Social environment satisfaction	+	.241	Weak relationship	.000	Very reliable
The concept of neighborhood—Social environment satisfaction	+	.210	Weak relationship	.000	Very reliable

both sample groups.

Table 12.
The Relationship Between Income Level and Ease of Transportation, Accessibility, and Social Environment Satisfaction in the Mass Housing Sample

Mass Housing Sample					
The Relationships	Type	Coefficient	Strength*	Significance (Two-Tailed)	Reliability
Income level—Ease of transportation	-	.116	Very weak relationship	.035	Reliable
Ease of transportation—Accessibility	+	.466	Medium relationship	.000	Very reliable
Accessibility—Social environment satisfaction	+	.332	Weak relationship	.000	Very reliable
Income level—Social environment satisfaction	+	.216	Very weak relationship	.000	Very reliable

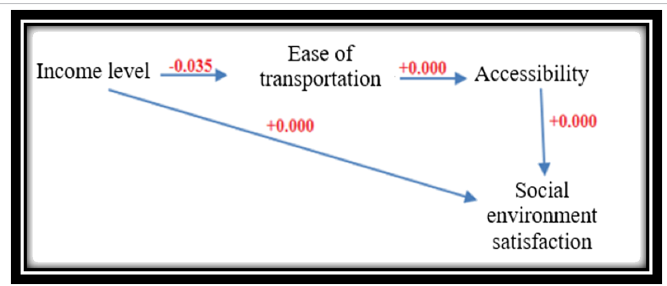


Figure 6.
The Relationship Model of Income Level—Ease of Transportation, Accessibility, and Social Environment Satisfaction in the Mass Housing Sample.

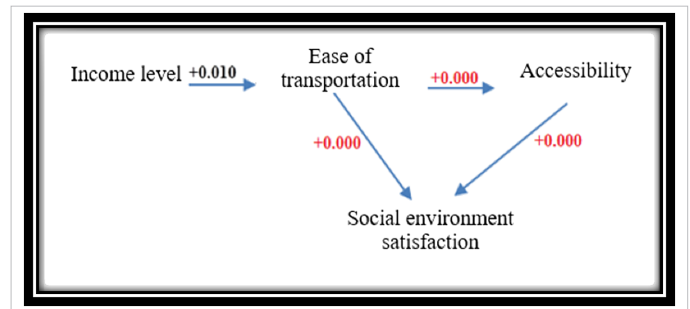


Figure 7.
The Relationship Model of Income Level and Ease of Transportation, Accessibility, and Social Environment Satisfaction in the Neighborhood Sample.

Mass housing and neighborhood samples were determined as regions with two different settlement types in order to provide a comparison between the two sample groups. In this scope of the research, two different questionnaires were applied to the samples in order to determine the quality of life criteria, the perception and adequacy of green spaces, the efficiency of the standards, and the socioeconomic structure. The demographic characteristics of the participants, their level of satisfaction with the housing environment, social environment, and green spaces were revealed with the conducted questionnaires. In the study, methods such as frequency and correlation analysis were used within the scope of statistical analysis.

Since socioeconomic structure, recreation opportunities, green space use, and awareness are taken as the factors related to urban life quality, significant and important differences are found between two different settlements in Küçükçekmece District which are selected as a research area in the result of the frequency analysis.

When we examine the relationships between the frequency of green space use-neighborhood concept-social environment satisfaction in the models based on correlation analysis, the increase in the use of

green spaces in the mass housing sample strengthens the neighborhood relationship and enables individuals to socialize. In other words, green spaces become a social environment factor for those living in the mass housing. In the neighborhood sample, the frequency of use of green spaces does not affect the concept of neighborhood directly because neighborly relations already exist. However, the use of green spaces directly affects the social environment satisfaction in the same sample. As the frequency of green space use increases, the frequency of meeting with neighbors and positive attitudes toward social environment increase in the mass housing sample. The use of green space turns into a socialization factor for people living in the mass housing. In the neighborhood sample, although there was no relationship between the frequency of green space use and the frequency of meeting with neighbors, it was observed that the positive perception of the social environment increased in accordance with the use of green spaces. As the use and adequacy of green spaces increase, the level of satisfaction with the housing environment increases in both the mass housing and the neighborhood samples.

The fact that the functions in green spaces are in good condition increases the frequency of green space use and the feeling of

Table 13.
The Relationship of Income Level and Ease of Transportation, Accessibility, and Social Environment Satisfaction in the Neighborhood Sample

Neighborhood Sample					
The Relationships	Type	Coefficient	Strength*	Sig. (Two-Tailed)	Reliability
Income level—Ease of transportation	+	.010	No relationship	.829	-
Ease of transportation—Accessibility	+	.466	Weak relationship	.000	Very reliable
Ease of transportation—Social environment satisfaction	+	.217	Very weak relationship	.000	Very reliable
Accessibility—Social environment satisfaction	+	.367	Weak relationship	.000	Very reliable

satisfaction with the parks, which make people spend more time in the parks. The increase in the frequency of green space use for the both samples shows that the activities in the parks are found good and people are satisfied with the parks. When this assessment is examined from another aspect, good parking features increase the use of green spaces and positively affect the perception of green space adequacy. This increases the quality of life related to green spaces.

As a result of the correlation analysis, it was seen that sociodemographic characteristics were effective on green space use and adequacy. In the mass housing sample, it was observed that as the age-income-education level increased, the satisfaction and use of the park properties increased and green space awareness occurred. In the neighborhood sample, there was no relationship between income level and green space use. It has been observed that only the education level affects the satisfaction and contributes to the positive perception on the green space adequacy. As explained in the frequency analyses regarding transportation in the mass housing sample, as the income level increases, the perceived level of ease of transportation decreases. As the ease of transportation increases, accessibility is positively affected and social environment satisfaction increases. An increase in income level has a direct positive effect on social environment satisfaction. In the neighborhood sample, there is no relationship between income level and ease of transportation. There is a positive relationship between the concepts of ease of transportation and accessibility and social environment satisfaction.

It can be said that this study has two results. The first of these is that the presence of green areas and satisfaction with green areas directly affect the quality of life, especially in residential areas. For this reason, it has been determined that the quality of life in the mass housing is much higher due to the fact that the mass housing have more green areas than the neighborhoods and that these green spaces are used regularly by the residents of the mass housing. The second result is that the residential areas are also changing with the urbanization forms that are changing day by day. The residential areas in the cities formed by the neighborhood structure are now moving toward secure sites and mass housing. However, this system, in which the neighborhood culture, social life, small businesses and neighborhood tradesmen are a whole, especially in the neighborhoods, is missed as it can be understood from the survey answers. In this context, instead of turning to these sites and mass housing in the formation and reorganization of cities, it would be the most correct approach to evaluate the neighborhoods with their parks and green areas (in terms of number, quality, and accessibility), small businesses, and neighborhood culture, according to today's conditions.

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