Proceeding Book of ISESER 2021

O 13. THE IMPORTANCE OF GREEN AREAS FOR HUMAN HEALTH

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ABSTRACT: Today, the effects of green areas on human health and psychology are known by most people and it is thought that green has a relaxing effect on people. Considering the history, the importance given to green in the past also stands out. Green areas have become more important in today's Covid 19 pandemic period. In this study, the psychological and physical effects of green areas on human health, their positive and negative aspects, as well as the effects of universal problems such as environmental pollution, which is increasing day by day, on human health in our country and in the world will be examined, and issues such as the studies on green areas in our country and the number of green areas per person will also be discussed.

Keywords*: Green areas, sustainable environment, urban areas, human psychology*

INTRODUCTION

Urban green areas are public spaces that determine the quality of the physical and social environment within the urban area, allow educational, cultural and recreational uses and are open to the use of all members of the society (Akay and Ocakçı 2003; Akça and Yazici, 2017).
Open and green areas are a long-term balance for various uses in a city's structure; are a living organism that creates various possibilities for versatile outdoor uses at the same time. This organism has long-term efficacy and validity for the period it is in, as well as for the future periods (Öztan 1991; Yazici and Gülgün, 2017; Yazici and Ünsal, 2019).

Figure 1. Uskudar, Istanbul (Url-1)

The idea that being in touch with nature helps to relax psychologically and reduces the stress of city life emerged with the beginning of urbanisation (Ulrich and Parsons, 1992). Research on the positive effects of nature on human psychology has shown an increasing development over the last 30 years. Researches conducted in recent years have begun to draw attention to the relationship between visual environmental quality and the physical health of people. Several studies in this field showed that watching the nature can positively affect the physical health of people (Gülgün et al., 2015; Temizel et al., 2017; Yazici and A.Sağlamer,2019)
Within the context of this study, the effects of green areas on human health have been evaluated with its positive and negative sides in terms of psychological and physical aspects, the amount of green areas in

Turkey and studies related to the improvement of green areas have been examined, and universal issues such as environmental pollution have been evaluated in terms of their effects on human health.

THE EFFECTS OF NATURAL LANDSCAPE ON PSYCHOLOGICAL AND PHYSICAL HEALTH OF PEOPLE

Potential benefits of living with nature for urban people were researched by those who work on environmental psychology, and in many environmental literature, the view that being with nature has positive effects on human psychology has been widely accepted.
It is noted that in addition to being directly in touch with nature (active contact), people gain various benefits from nature only through seeing nature (passive contact), such as watching flowers in a park or looking at trees from a window, and even knowing that such areas are nearby and can be used when desired (Ulrich and Parson, 1992).
Starting to buy flowers and plants for their homes and gardens, engaging in nature-based activities and hobbies, and buying houses with gardens for themselves are all well-known indicators that people gain various benefits from being in touch with the nature when the income levels of people rise above the normal life standards (Beer, 1990). However, there are also studies trying to reveal scientific evidence on this subject conducted in the United States of America, most of the places that were found attractive for tourists were composed of natural areas (Kaplan, 1992), houses that were close to green areas and parks were more valuable, such places were less likely to change owners, and people living in places that lack green areas were disliked (Gold, 1980) was shown as evidence of how important urban natural areas were to people.
Although the importance of parks and green areas for people is mostly associated with recreational and social activities, it is stated that people can obtain significant psychological benefits from passive relationships with nature based on visual basis (Ulrich and Addoms, 1981).

RESEARCHES ON THE EFFECTS OF NATURAL AREAS ON HUMAN PSYCHOLOGY

Researches on the positive effects of nature on human psychology has shown increased development over the past 30 years. One study, considered one of the first of such studies, analysed the psychological benefits people obtain from their house gardens (Kaplan, 1992). In the study, three different psychological effects were identified: active participation (such as working in the garden or walking), passive participation (such as watching the garden from the window) and intellectual participation (such as planning social activities by supporting the self-confidence of the people in various ways), and it is emphasised that the opportunity of working in the garden provides for individuals to express themselves.
Studies on physiological responses to the visual environment also shown that natural areas, contrary to built-up areas, have a restorative and positive effects on the emotional states of people.
The study of environmental psychology also conducted a series of experiments to test the validity of the hypothesis that viewing nature and enjoying natural scenery has positive effects on people's psychological health. First (Ulrich, 1979), the effects of visual landscape on the emotional states of stressed students who completed a final exam were analysed. As a result of the research, it was observed that the stress level of the students watching natural scenery decreased while the students watching the urban landscapes became even more stressed than they were after the exam.
Ulrich, in his third research on this subject (Ulrich et al., 1991), measured the physiological and psych-physiological responses (heart rate, blood pressure, muscle tension, brain waves) of individuals watching natural landscapes, proved that watching natural scenery reduces stress on subjects and accelerates recovery from stressful situations, and showed that there is a complete consistency among the stress-measuring values that nature has healing effects.
Hartig et al. (1991) provided relatively stronger evidences that being in natural areas ease mental fatigue relief. In a study comparing three groups; who went on a nature trip, had a holiday in the city, and did not take a vacation, the groups were asked to correct mistakes on a reading, and as a result, it was determined that the group who went on a nature trip obtained the best score.

URBAN GREEN AREA

Open and green areas are a long-term balance for various uses in a city's structure; are a living organism that creates various possibilities for versatile outdoor uses at the same time. This organism has long-term efficacy and validity for the period it is in, as well as for the future periods (Öztan 1991). According to Yuen (1996), urban green areas are public spaces that determine the quality of the physical and social environment within the urban area, allow educational, cultural and recreational uses and are open to the use of all members of the society.

Figure 2. Karatay/Konya (Url 2)

Urban Green Area Approaches

The conception of "green area" is defined in the dictionary as spaces reserved for recreational uses in urban areas.
"Modern society leaves the natural environment and lives in an artificial environment. It is necessary to adapt to the conditions of nature again." These words of Le Corbusier become more and more important each day in direct proportion to the increase in urban development (Yıldızcı 1982).
Le Corbusier, the famous urbanist-architect of our age, based his plans on three main principles, these are; the sun, spaciousness and green. He states that he found these principles in Istanbul, which he visited in 1911. Stating that the houses in Istanbul are surrounded by trees, the great master task about the attractive friendship between "human" and "nature" and says: "If we compare New York with Istanbul, we can say that one is a disaster and the other is a heaven on earth. Istanbul is an orchard; our cities are quarries." (Kortan 2017).
Le Corbusie defines the cities of today and tomorrow as follows: " The gigantic fact of tomorrow's metropolitans will thrive in a delightful greenery. This city must be entirely in green and spacious spaces. Even in the heart of business cities where skyscrapers raise their heads, the city must still remain green. Trees are the kings, nature-human connection must re-established, the city must be a giant park" (Yeşil, 2006).
Famous urbanist-architect M.V. Posokhin says "A city without water and vegetation is dead even if the architecture of its buildings are good", meaning, "an uninhabitable city" (Kortan 2017).

Functions of Urban Green Areas

Open and green areas in the urban texture are of great importance in terms of urban ecology. Open and green areas provide equipment for sports, entertainment and recreation purposes, create a positive effect in ecological and microclimatic aspects, enable agricultural production and act as a buffer that prevents the overgrowth of the city. In the environment of cities, which is petrified, concrete, made up of steel and glass stacks, the green areas have the functions of improving the climate, shading, filtering dust, reducing the noise effect, providing recreation and responding positively to the physiological and psychological needs of the urban people with cultural activities.

Psychological Functions of Green Areas

Urban green areas are spaces where people can escape from the crowd, pollution, noise and monotonous lifestyle. These clean, calm and peaceful places are also of great importance in terms of human mental health. Green areas, which enable the relationship between nature and humans, provide both physical and psycho-hygienic benefits to city dwellers.
In addition to improving perception, green areas absorb, diffuse and cut high-frequency noise, and alleviate the negative pressures of noise pollution on human health when they are planned as green curtains and green belts (Aksoy, 2004).

Social Functions of Green Areas

Green areas are regulated as spaces that are conducive to some social activities with their distribution in the city. They serve as a venue for social and political activities on certain days, and enable the people of the city to gather and meet up (Bayraktar 1973). Parks, squares, garden exhibitions, arboretums, sports fields, etc. Green areas, where recreative uses are important, are spaces that bring the people of the city together and ensure the establishment of social communication.
There are also spaces that contribute to the education of the public within the scope of green areas. The visits of children of primary school age to botanical gardens have now become a tradition. Activities in these areas, where educational lectures are held on subjects such as the importance and functions of love of nature, are reinforced with the necessary arrangements.

Recreational Functions of Green Areas

Green areas provide organised outdoor space for recreational purposes. They provide all opportunities for active and passive recreational activities where people from all age groups can participate in entertainment, relaxation, play and sports activities.
Green areas offer the necessary equipment for sports, relaxation, recreation activities and promenade both in the city centre and the country. It also offers a landscape and a natural resource to the people of the city (Odabaş, 1990).

Green Open Areas in Turkey

According to the regulations of the Ministry of Environment and Urbanisation, the amount of green area required per person in the city is at least 15 m^2 and the rate of "active green area" recommended by the World Health Organisation is at least 9 m^2 per person. Ministerial data showing that the average green area per capita in Turkey is 6.2 m^2, shows that there is a 10 m^2 green area deficit in cities.
According to the Ministry of Environment and Urbanisation, active green areas are places such as parks, gardens, picnic sites, urban forests, which are generally open to public use while passive areas are places that the public do not always benefit from, such as cemeteries, forests and so on.
Green area planning in Turkey is made according to the construction legislations. In the legislation, the amount of green area per person was foreseen as 7 m^2. The Ministry of Environment and Urbanisation, with the Spatial Planning Construction Regulation dated 14 June 2014, increased the amount of green area per person first to 10 m^2 first, then to 15 m^2. With the regulation, the scope of the green areas was also determined: On neighbourhood scale; children's playground, park, square, district sports areas, botanical parks, recreation areas and recreation uses, on city scale; zoo, urban forest, afforestation area, fair, show-ground and festival area, hippodrome.

Cities with the Lowest Percentage of Public Green Area;
Tokyo; Population: 35 million Percentage of public green area: 7.5%
Bogota; Population: 7.2 million Percentage of public green area: 4.9%
Taipei; Population: 2.7 million Percentage of public green area: 3.4%
Istanbul; Population: 15 million Percentage of public green area: 2.2% (Irmak and Avcı, 2019).

CONCLUSION AND RECOMMENDATIONS

Since the earliest days of humanity, green areas have not only met the nutritional need of humans, but have also met people's needs for different levels of prosperity and well-being (WardThompson 2011). Frederick Law Olmsted, who was considered the first landscape architect about a hundred years ago, focused on the impact of green areas on human health. Today, especially in developed countries, politicians and public health experts take the impact of green areas on human health into consideration (Morris et al. 2006). In this study, the relationship between the amount of green area per person in Turkey and heart attack, natural deaths and suicide events was analysed and the effects of green areas on human health were evaluated comprehensively. As a result of the research; it has been concluded that as the amount of green area per person increases, the rate of heart attack, natural death and suicide incidents decreases. Therefore, this study emphasises that the effect of green areas on human physical and mental health should not be underestimated (Akpınar and Cankurt, 2015).

In this study, the relationship between the quality of urban green areas and the physical and mental health of adults was analysed. The effect of green areas on human health becomes more important each year and studies on this subject increases. In this context, important results were obtained in this study and it was concluded that;

- The distance of urban green areas from houses is one of the important factors in terms of physical activity and health,
- Large and open, visible green areas are positively associated with general health,
- The environmental cleaning and size of green areas are positively associated with people's stress level,
- Urban areas should be located at a maximum distance of 1000 m or 15 minutes from the houses of the people,
- Urban green areas should be well-kept and clean, also, large and visible green areas should be planned and their designs should be created accordingly.

It should be ensured that both green areas with ecological value and, open and green areas bearing social-cultural values in terms of community development and health are protected. An evaluation system that includes certain factors ranging from physical characteristics to socio-economic characteristics should be established in determining the priorities of investments to be made in open and green areas. This system will be a positive tool in increasing the quality of green areas, especially through the evaluation and management of green area potentials. In order for the cities of the future to become healthier places to live, more green areas are needed in cities. At this point, it should not be forgotten that green areas are the first step in establishing sustainable city administrations. It is now a scientifically proven fact that the lack of green areas threatens the lives of people. Because of this, necessary legal regulations should be made in order to protect green areas more strictly and necessary assistance should be provided to city administrators to meet green areas per capita.

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