

## Green Space and Quality of Life: An Approach to the Requirements of the Elderly

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### ABSTRACT

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### Dear Editor in Chief

Advances in medicine and health in the second half of the twentieth century has increased human life expectancy. According to the statistics of the World Health Organization, by 2000, the population of people aged 60 and over was about 600 million, and this number will reach 1.2 billion by 2025 (Wang et al., 2017). Iran, as one of the developing countries, is no exception; Therefore, the growth of old age can be seen in the aging process of Iran's population. The number of elderly people in Iran in 2025 will increase more than 26 million (Kazemi, Sajjadi, & Bahrami, 2019).

Due to the increase in the elderly population, the welfare of the elderly in terms of physical, mental and social dimensions is considered as a need of the elderly population. One of the indicators that reflect well the condition of the elderly is the quality of life index. The presence of the elderly in communities requires meeting their needs (Lau, Yung, & Tan, 2021). If there is no space for this

response and they cannot get a response from the environment that suits their needs, they will suffer from depression. Since the inability of the elderly in various cases is annoying, because it causes the person to feel that he is not able to relate to others (Lee & Lee, 2019). The purpose of this article is to study Green space and quality of life with an approach to requirements of the elderly. This is a thematic study.

Aging is a critical period of human life and paying attention to the issues and needs of this stage is a social necessity. Therefore, paying attention to the design of spaces that promote the health and quality of life of the elderly is very important (Wen, Albert, & Von Haaren, 2018). Nowadays, due to the growing population and consequently the increase of residential buildings and the overcrowding of public vehicles, the need for green spaces and its importance on the quality of human life is felt (Kabisch, Strohbach, Haase, & Kronenberg, 2016). Urban parks and

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green spaces have a positive impact on the urban environment through direct protection against environmental physical effects. Green spaces protect us from air pollution, noise pollution, wind, soil erosion, heat, etc. Trees are good for controlling particulate matter, as well as absorbing sulfur dioxide, nitrogen oxide, and carbon monoxide (Ekkel & de Vries, 2017).

Studies also show that trees and other green spaces help reduce ambient temperature, the effect of "urban heat island" and dust domes, and stabilize the microclimate and moderate the temperature and create cool, fresh air for urban areas (McCracken, Allen, & Gow, 2016). But environmental function is not the only utilization and consequence of urban green spaces. Among the most important consequences of parks and urban green spaces mentioned in various studies is the positive impact on public health (Zhang, Van den Berg, Van Dijk, & Weitkamp, 2017).

The elderlies are one of the social groups that, due to their age and relative reduction in work activities, mainly use urban green spaces for voluntary and social activities (Dzhambov, Hartig, Markevych, Tilov, & Dimitrova, 2018). Among the effects of living in green space is the reduction of the negative effects of stress, is considerable (Barbosa et al., 2007). Natural situations have many attracting stimuli and unconscious attention is activated that supports recovery and improves. In addition, the effects of nature's positivity are due to the effects that colors have on humans. Colors have different emotional and cognitive effect on elderly (You, H. 2016).

Studies have shown that living in nature positively affects cardiovascular function, reduces the rate of physiological responses to stress, and increases the ability to adapt to events. It has also been shown that seeing nature reduces heart rate, relieves muscle tension, lowers blood pressure and increases electrical conduction (Davies & Laforteza, 2017; Ekkel & de Vries, 2017; Kabisch et al., 2016; McCracken et al., 2016).

Green space can help to improve the brain's semiconductor activity and increase the overall functioning of the brain. Perhaps this is a technical explanation of the fact that elderly are emptying their minds when they step on the park. It has been shown that communication with nature increases concentration, eliminates mental fatigue, and has a positive effect on mood (Coolen & Meesters, 2012). It has also been shown that natural environments increase elderly's cognitive function (Hamid & Babamiri, 2012).

Life and activity in nature improves self-esteem and mood. Urban green spaces also provide opportunities for social interactions. This in turn could reduce social isolation, generate social capital, and lead to greater personal resilience and well-being. This seems to be particularly important for elderly population. Interestingly, in a few studies, social factors (e.g., neighborliness) had a greater influence on the frequency of use of urban parks than the physical features of the parks (Hoffmann, Barros, & Ribeiro, 2017).

In all, Old age is the age of dealing with a number of mental and physical limitations. Proper design of green space can largely meet their spiritual and psychological needs and attach them to the living environment and its surroundings. Designing suitable parks for the elderly or healing gardens is the need of today's stressful life. Perception of nature is one of the influential components on the socialization of space and the environment that allows the perception of nature, both visually and physically, can have a significant impact on the formation of social interactions. This can be a way to design better environments in the elderly residential complexes to prevent their isolation and provide better quality for the public spaces of these complexes.

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