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## The Important Roles of Parks and Gardens in the Quality of Life. A Review

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### ABSTRACT

Parks are considered as one of the important land usage, especially after the steady increase in population number that followed by vertical and horizontal expansion in housing, and the industrial growth which result in environmental pollution that negatively affect human health, productivity and the national income. Thus Parks are being one of the spaces that combine the activities of psychological comfort, pleasure, sports and aesthetic in addition to the economical, environmental, social and health benefits, which enhance individual, family and community wellbeing. In Sudan which is not exception from the other societies and due to civilization and social developments, parks gain greater popularity.

**Keywords:** Parks, land usage, population, quality, life

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### 1. Introduction

Alberta Culture and Tourism. Final Report. (2017) defined Parks as green areas or cultivated lands with few or no buildings within or adjoining a town, maintained for recreational and ornamental purposes. Parks may consist of grassy areas, rocks, soil and trees, also it may contain buildings and other artifacts such as monuments, fountains or playground structures. Many parks have fields for playing sports such as soccer, baseball and football, and paved areas for games such as basketball. Also they may have trails for walking, biking and other activities. Some parks are built adjacent to bodies of water or watercourses and may comprise a beach or boat dock area. Urban parks sometimes have benches for sitting, picnic tables and barbecue grills. However, Sada *et al.*, (2018) recorded that, urban parks are considered as one of the important usage for land within the urban space of the city.

With the increasing needs of the population so the need has become urgent to the expansion in green areas, gardens and parks due to increase in transport and transportation and the industrial growth with the vertical and horizontal expansion in housing, all that beside the technological and economic progress which result in pollution in water, air, soil, noise and what follows in negative effect on human health and productivity affecting the national income and the standard of living of the population. (Noah, 2011) also as it is being one of the spaces that combine the activities of psychological comfort, pleasure and aesthetic in addition to the environmental, social and health benefits (Sada *et al.*, 2018).

In terms of health, parks can be considered as the lungs through which cities breath, and increasing the area of gardens means a healthy environment for man, and increasing the high art and taste of peoples. Parks contribute significantly to the consolidation of social ties among people where they meet and get to know each other. parks also play a key role in beautification of cities with their plants of different shapes and colors, and aesthetic views such as fountains, ponds, arches and others, which beautify the surrounding sites and attract the attention (Noah, 2011).

Parks and gardens have an important role in sustainable development. The presence of natural areas contributes to the quality of life in many ways, as urban nature provides important social and psychological benefits to human societies, which enrich human life with meanings and emotions. Arpana and Anjana, (2014) addressed the importance of urban nature for citizens' well-being and for the sustainability of the city they inhabit, and confirmed that, the experience of nature in urban

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environment is source of positive feelings and beneficial services, which fulfil important immaterial and non-consumptive human needs.

It is estimated that, each year well over half the UK population, some 33 million people make more than 2.5 billion visits to urban green spaces alone (Dunnett, *etal.* 2002). People become attached to these parks, gardens and other open places, and appreciate them for what they offer culturally, socially and personally. In research carried out for CABE, 85 per cent of the people surveyed felt that the quality of public space and the built environment has a direct impact on their lives and on the way they feel (CABE. 2002).

This review paper addresses the importance of parks and gardens to the local community. It recognizes the important roles of parks and gardens that play in economics, recreation, and in public physical and mental health. The paper discusses how parks and gardens create aesthetics, social and environmental value.

### **The Economic Value of recreational parks:**

A good-quality public landscape can have a significant impact on the economic life of urban centers. It was revealed that, well-planned improvements to public spaces within town centers can boost commercial trading by up to 40 per cent and thus, generate significant private sector investment (DoE, 1997) .

It was shown that, a high-quality public space has a positive impact on the price of nearby commercial properties. In the towns of Emmen, Appeldoorn and Leiden in the Netherlands, it has been shown that a garden bordering water can increase the price of a house by 11 per cent, while having a lake nearby or a view of water can boost the price by 7 per cent and 10 per cent respectively. A view of a park was shown to raise house prices by 8 per cent, and having a park nearby by 6 per cent. This compares with a view of an apartment block, which can reduce the price by 7 per cent (Luttik, 2000). In Dallas, many residents cited that, the public green spaces running behind their back gardens as a major factor in their decision to move to the area. 60 per cent of these residents believed that the value of their homes was at least 15 per cent higher because of the presence of the green spaces. Half of the people who did not have green spaces at the back of their homes said they would prefer to have this kind of communal green area close by, even though that would mean less private open space. Almost all residents valued these public green spaces highly and most used them for recreational activities regardless of whether or not their homes backed on to them (Peiser, and Schwann, 1993).

Being close to public space adds economic value, as Small businesses always choosing a new business location rank public space as a number-one priority (The Trust for Public Land, 2001). Lease rates of properties facing Post Office Square in Boston, Massachusetts, command a 10 per cent premium over those without a park view (Phillips, 2000). In 1980, 16 per cent of Denver residents said they would pay more to live near a greenbelt or park. By 1990 this figure had risen to 48 per cent (The Trust for Public Land, 2001). In 1985, Municipal investment in Union Square, New York, stimulated private housing investment in the area. Restoration of the park helped to stabilize commercial and residential property values adjacent to the park. Apartments with a park view command a higher price than those without (Phillips, 2000). In Berlin in 2000, a study carried out by Luther, and Gruehn, (2001) showed that, proximity to playgrounds in residential areas was found to increase land values by up to 16 per cent. While, a high number of street trees resulted in an increase of 17 per cent in land values By helping to increase the value of homes in this way, parks, gardens and other public spaces bring wider benefits in terms of increased taxes paid to government (or, in the US, to the state) when properties are bought and sold, thus creating tax revenue. A good example comes from San Francisco, where proximity to the Golden Gate Park has been known to increase property prices from \$500 million to \$1 billion, thus generating between \$5-10 million for the state in annual property taxes (Testimony, 1993).

### **The important role of recreational parks in the environmental quality**

The significant increase in hard surfacing which is met by the reduction in green spaces lead to higher temperatures in towns and cities than in the surrounding countryside. Which is known as the 'heat island effect' (Lowry, 1967). Vegetation in public spaces or gardens can help to redress this imbalance. It brings many important environmental benefits to urban areas, including air cooling and the absorption of atmospheric pollutants (Littlefair *et al.*, 2000). Also Vegetation provides an opportunity for people to be close to 'nature', which is associated with positive impact that can bring in

terms of mental health and pleasure. The difference in temperatures between parks and the surrounding urban areas, can give rise to a 'park breeze' (a gentle wind which blows from the park out to the adjacent buildings). Poor air quality in a town may be ameliorated by the fresh air blown out from the parks. Indeed, air even in small parks has on the whole been found to be purer than that of its surroundings despite being close to heavy traffic. This depends on the layout of the town and wind direction (Upmanis, 2000). A study of four urban areas on Merseyside, declared that the greatest influence on their ecology was the proportion of green space, particularly trees. As the places with the greatest number of trees had better carbon-storage capacity and a lower level of surface water running off into drains (allowing sewers to cope better with water-flow and minimizing flood problems).

Moreover, the temperature was 7°C cooler where vegetation cover was 50 per cent compared to areas where the vegetation cover was only 15 per cent (Whitford *et al.*, 2001). Research in Tel Aviv similarly points to the benefits of trees: it was shown that the presence of trees resulted in a cooling of the air temperature of between 1°C in a heavily trafficked street to 4°C in the smallest (0.15h a) garden.

Tel Aviv study also found that the shape of the green area had an impact on cooling, and that the cooling effect could be felt up to 100 m from the site (Shashua-Bar, and Hoffman, 2000). Cooling can be facilitated by even a small space – parks of only one or two hectares have been found to be two degrees cooler than surrounding areas (Upmanis, 2000). Moreover, trees have the benefit of providing shade on hot days and in sunny climates.

It could be summarized that, Parks in and around cities play an important role in influencing the prevailing climatic conditions, through garden plants which contribute directly to improving climatic conditions, as plants provide great protection from pollution and its effects on public health. As well as providing shade, reducing temperature, softening the air, purifying it, and protecting from sands and winds.

### **The effects of recreational parks on social and neighborhood character**

Parks and gardens are characterized by being open to all people, regardless of ethnic origin, gender, age, economic and social level of pioneers and as such they represent a democratic forum for citizens and society. When properly designed, they provide meeting places, bring communities together, and foster social ties of a kind that have been disappearing in many urban areas. These spaces shape the cultural identity of an area and provide a sense of place for local communities (Sir Stuart, date).

Parks and gardens near our homes can give us a valuable place to socialize with our neighbours, thus Promoting neighbourliness and social inclusion. Parks and allotments, can provide an especially good community focus and an opportunity for small, personal interactions: in the West Mid lands, allotments have been shown to encourage cross- community and cross-cultural ties (Baulkwill, 2002). On a larger scale, community gardens and city farms, can bring people together from different ages and cultures, and thus help to create a real sense of neighbourhood ( Baulkwill, 2002 and Massey, 2002).

However, quality counts: the better the garden design, the better the quality of the social experience. In this regard, it has been shown that big, bland spaces on housing estates fail to offer the same opportunities for social cohesion as more personal spaces (Quayle *et al.* 1997). Parks and gardens generate community cohesion and result in a city with a unique identity, one to which residents positively respond (Hagelskamp, 2003).

One of the benefits of parks is its potential as a venue for social events. Well managed festivals and other events can have a positive effect on the urban environment, drawing the community together and bringing environmental, social and financial benefits. Thus, they can reintroduce the kind of civil society that has been lost in too many of our urban areas. A good example is the annual New Year's Eve 'First Night' festival in Boston, US, which has established itself as a key feature in the city's calendar; business people who were reinitialed sceptical about its potential see the festival as a major boost for their companies. To encourage events like these, cities need to plan the physical layout of their recreational parks with festivals and other social activities in mind (Schuster, 1995).

Mowbray Park, Sunderland Lower Gardens, Bournemouth, Lister Park, Bradford Green recreational parks are generally, well-used public space. As a study in Chicago found that people living in apartments tended to use nearby public spaces more if they were 'natural' than if they were man-made. This increased use of the green spaces led in turn to a greater amount of socializing among neighbours –initially as they met while simply pausing to sit, and later to deepen social ties (Kuo *et al.*, 1998).

It is found that, a view of trees, flowers and natural areas nearby is, the strongest factor affecting people's satisfaction with their neighbourhood. As green spaces surrounded by housing or are a continuation of the home environment, have a social value and significantly affects feelings of community (Kaplan, 1985). Green areas and parks within residential communities, work to enhance social relations and create opportunities for acquaintance between members of the neighborhood and also work to increase their awareness and environmental culture (Health Council of the Northern Land, 2005). Studies indicate that green spaces are Clustering places that creates safer, healthier, cohesive societies (Ku and Francis, 2001). It is also revealed that, good-quality-parks that contain walking tracks, are among the most important factors that are taken into account when individuals choose a place to live (Kaplan, 2009).

### **The aesthetics importance of Recreational Parks**

It is mentioned that, there are three main uses of plants in designing parks and gardens, the first and the main use, is the aesthetic use of plants in garden design. Where plant collections are used in many forms in modern designs, especially in architectural design (Al mana, and Alhamdi, 1990). The aesthetic use is the main use of plants in parks and gardens, where plants are used as an attractive individual models, they break architecture lines, provide beautiful coloration, and give movement and life to the garden. There must be good knowledge in distributing plants in gardens which is called science of coordinating and designing plants, which completes science of landscape design (Polat *et al.*, 2010). It is generally recognised that, greenery filled public areas provide comfortable and pleasant living environments for urban residents (Lawrence, 1996). Park and gardens form a strong bond between man and his surroundings. Instinctively, man feels great need for a place in which he can rest his soul and reassure his feelings and conscience and rest in it by looking towards his beauty and relieves him from work trouble (El-Degwy, 2004). According to (Evenson *et al.*, 2006), the safety component and the aesthetic appearance of the gardens are the two important features of the parks and open areas on which visiting to the park depends.

### **The Impact of recreational parks on Physical and Mental Health**

Beneficial health effects of urban green spaces, such as improved mental health, reduced cardiovascular morbidity and mortality, obesity and risk of type 2 diabetes, and improved pregnancy outcomes. Mechanisms leading to these health benefits include psychological relaxation and stress alleviation, increased physical activity, reduced exposure to air pollutants, noise and excess heat. WHO, (2016). As general, access to public open space and gardens has been associated with better perceived general health (de Vries, 2003 and Maas, 2006). Researchers explained that, children with attention deficits concentrate better after walk in recreational park. Their findings indicate that environments can enhance attention not only in the general population but also in ADHD (Attention Deficit Hyperactivity Disorder) populations. There for, "Doses of nature" might serve as a safe, inexpensive, widely accessible new tool in managing ADHD symptoms in children (Taylor and Kuo, 2009). Green spaces have great value for children with Attention Deficit Disorder (ADD). When parents of children with ADD were asked to nominate the activities that they had found made their children more manageable, 85 per cent of green-space activities (such as fishing and soccer) were said to improve the children's behavior (Taylor *et al.*, 2001). In stress rehabilitation through garden therapy: researchers confirm the garden as a place in the recovery from stress in adults, and it is associated with shortening recovery time that the individual needs after undergoing surgery (Mass *et al.*, 2006). Also, (Grahn, 2003; Nielsen, 2007) revealed that, access to public open space, parks and gardens result in reduced stress levels. There is increasing evidence that 'nature' in the urban environment is good for both physical and mental health. As natural views of elements such as trees and lakes promote a drop in blood pressure and reduce feelings of stress (Hartig *et al.*, 2003).

Depression is considered as a major health problem among the elderly, decreasing the quality of life and adding to the cost of care. It is noticed that, parks visits were associated with enhanced emotional well-being among the elderly in long-term care, and these effects were more pronounced among those who were depressed. It is found that plants in the gardens of facilities were of great importance as emotional regulation was associated with seeing plants (Anna, 2013). This finding is confirmed by Morita (2007) who revealed that, access to parks and gardens, has been associated with

reduced depression. Also (Santana *et al.*, 2009) pointed out that, residents of cities with a lot of green areas are healthier and suffer less depression than those who live in environments dominated by asphalt. Evidence from Japan emphasises that, living in areas with walkable green spaces positively influenced the longevity of urban senior citizens independent of their age, sex, marital status, baseline functional status, and socioeconomic status (Takano *et al.*, 2002). Access to parks and gardens has been associated with more walking (Li, 2005 and Giles-Corti, 2005). There is a substantial evidence demonstrating that increased walking improves physical and mental health (Manson, 2002; Fritz, 2006; Murphy, 2002 ; Tsuji, 2003). Further more, it has been proven that, walking reduce the risk of a heart attack by 50 per cent, and diabetes by 50 per cent (Hakim *et al.*, 1999), colon cancer by 30 per cent (Slattery, *et al.*, 1997), and fracture of the femur by up to 40 per cent (Grisso *et al.*, 1991). If done as part of a group, walking offers social benefits too. Improvement in people's mental well-being is one of the benefits of a better physical environment. When housing and the surrounding external environment on one typical new-town estate were upgraded in consultation with residents, 'substantial improvements in the mental health of those residents' were recorded (Halpern, 1995). Worldwide, mental health is a leading cause of burden of disease (WHO, 2003), and one of the beneficial effects of urban green spaces, is the improved mental health (WHO, 2016). Moreover, physical inactivity is a major public health risk (WHO, 2002) and in Australia, nearly half of all Australians do not meet even the 30 minute physical activity recommendations (Armstrong *et al.*, 2000).

### **The Psychological and recreation effect**

The role of parks and gardens Highlights the spreading of comfort, happiness and peace in the hearts of people, which result in the improvement of people's performance, because the psychological comfort is positively reflected on the physical health, the social relationships, and then the production. Studies have proven that a person's production increases if he is in a place with permanent greenery and a beautiful sign, where plants gives a sense of permanent vitality and freshness as a result of reducing the boredom resulting from the sharp and fixed lines of buildings and walls view. (Armstrong, 2000).

Under the UN Convention on the Rights of the Child, children have the right to play, recreation and culture (Petrie, 2000). Play is crucial for many aspects of children's development, but increasing urbanization has left children with far fewer opportunities than previous generations to play freely outdoors and experience the natural environment. Good-quality public spaces, including well-designed, well-maintained school grounds, can help to fill this gap, providing children with opportunities for fun, exercise and learning. Green spaces with trees and grass offer better play opportunities for children than places without such landscape elements. In Chicago, children were observed playing in areas surrounding apartment blocks; these play areas were similarly arranged but not all of them had trees and grass. It is found that, significantly higher levels of creative play were found in the green spaces than in the barren areas. Children playing in the green spaces also had more opportunity to be with adults, a factor that can aid the development of interpersonal skills (Taylor *et al.*, 1998).

To obtain both physical and mental health improvements through 'green exercise' – taking part in physical activities whilst at the same time being directly exposed to nature'. This can produce substantial public health benefits and reduce healthcare costs (Pretty *et al.*, 2003). For the numerous health benefits associated with access to public open space and gardens, users and potential users prefer nearby, attractive, and larger recreational parks and open spaces (Wolf, 2008).

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