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People and Urban Environment: Landscape Role in Health and Wellbeing

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Abstract

The World Health Organisation (WHO) now defines health not only in terms of disease prevention, but also in terms of environmental quality. For Muslims, the ultimate source of guidance on all questions, including the principle of environmental responsibility, is the Qur'an. It contains the basis for understanding ecological issues, the role of science, the correct way to interact with the environment, and the responsible use of the earth's resources such as trees. Trees in landscape design have a vital role to play in helping to deliver sustainable development and stimulate the quality of life. Exposure to the ultra-violet rays in strong sunlight is known to be the principal cause of skin cancer, and shade from trees can help to reduce the risk. Therefore this paper is to highlight the need for recognition of landscape contributions towards the quality of life in the benefits of green space and trees to public health.

Keywords: Trees, landscape, quality of life, health

Introduction

Even today in millennium era, a walk through the park, the sound of mingle birdsong or the sight of colourful flowers and leaves will make people feel good as well as the urban forest providing a natural contrast to the harshness of buildings, the noise and dirt of busy traffic. For over the years we have been conscious of the link between greenery and improved public health. Trees offer more than interest to the landscape. They also provide crucial breathing space. Trees are particularly good at filtering out pollution, and clean air is good for public health which is one of the significant issues in most communities. The Qur'anic descriptions of paradise are full of magnificent cool gardens with shade, fruit trees, sweet scents and running water - a tranquil oasis of peace. One can see the appeal of such a vision of heaven to those living in the arid lands from which Islam emerged (Wescoat, 2003). Indeed, the Arabic word 'jannah' means both garden and paradise. The Islamic Empire spanned from the 7th to the 16th century. From the establishment of the 1st Islamic State in Medina to the peak of the Ottoman Empire, the Islamic civilization dominated a millennium, encompassed half the world, and shaped the history of the human race. As the Islamic world expanded to all over the globe, gardens characteristic that were designed to be reflections of heaven on earth filled with the symbols of paradise as described in the Qur'an (Clark, 2004). The cultural heritage of Islam has long been evident in European science, art, literature and architecture (Watson, 1995). Andrew Watson also claimed that evidence is now appearing from many different regions which suggest very strongly that early Muslims made gardens that were the sites of serious scientific activity and may thus be considered true botanical gardens. Islamic colonisation of parts of Europe and the later colonisation of Islamic countries produced

rich historical exchange of ideas. Islamic gardens have played their part in this dynamic change.

Land become landscape when it is described or seen in terms of its physiographic and environmental characteristics and landscape varies according to those characteristics and the historical impact of man on it. Man's response to landscape has always been a harmonious understanding of the ecosystem and the environment. Man was meant to coexist with nature; loving and caring what God had created for them. Landscape and environment are therefore seen as an important matter of man's life. Landscape is measured as an asset to the country. It is dynamic and alive. As thing that is alive, we need to take care and manage it properly for it to mature as we intended it to be. According to Zube et. al. (1982), landscape is an integral part of our living environment. Its properties are judged on the basis of the "principles of art, design, ecology and resource management". Therefore our goal is to achieve a quality landscape that eventually creates quality environment and quality of life for the people to enjoy and admire.

In the past, people perceived landscape as beautification of land or space, planting of trees and adding of landscape elements for aesthetic value. Pathetically, landscape architect is considered as 'gardener', a perception, which is narrowed down to its lateral meaning. However, this perception has changed. Landscape is being perceived at a broader scope in creating better and quality environment for the people to live in. People are now admiring and enjoying landscape as a functional space and environment as a whole. They perceived landscape as part of the environment, which contributed to the existence of human and nature. Quality environment can be achieved by having a quality landscape as a substance. Eventually, quality of life is achieved in parallel with the quality of the environment.

Tress and Healthy Living Environment

Baines (2000) wrote that the relation between trees and people is a complex one. Tree-lovers appreciate the sound of birds, the display of blossom, fruit and changing leaf colour and the splendour of trees that rise above the rooftops. However, many people in our urban society see trees as a problem; a cause of poor health, difficult neighbours and damaged property. In recent years the occurrence of storm-water flooding has increased dramatically. Across the world, towns are being flooded after rainstorms with disastrous consequences for homes and businesses. The more extreme patterns that seem to be linked with global climate change have increasing impact due to the relentless sealing of the land's surface with concrete and tiles.

Trees in specific or urban forest as a whole neither landscape in general can play a vital and effective role in holding back rain water. When rain falls on the canopy of trees above car parks, roadsides and close-mown urban parks will help to protect the property that will bring worthwhile flood controlling benefits. The trees canopy closes in as little as two or three years, thus adding more woodland cover, slowing down rainstorm run-off and reducing the risk of pollution in adjacent streams and rivers. While tree pollen is a significant allergen for asthma sufferers, the positive health benefits that the landscape

(urban forest) can offer are substantially greater. Simply the accessibility of urban green space encourages more physical exercise. Lack of exercise is a major cause of illness in general. Ultra-violet radiation from the sun is the principal cause of skin cancer, and trees offer welcome shade. The landscape of urban forest also greatly improves the local climate and helps to make the air much healthier to breathe.

A research from the A and M University, Texas in United State of America shows that stress relief is clearly measurable within three minutes of exposure to nature and green space. Stress is a major contributor to poor health and a great deal of money is spent each year on pharmaceutical stress relief. This documentary evidence should make it easier to secure supports for landscape in urban forestry as part of the emerging culture of prevention rather than cure in modern health care (Jones, 2003).

The Need of Greenery Connection

Towns and cities life is very exciting, challenging, inspired with full of opportunities act such a magnet which continues attracting people from all backgrounds to work and live in. However, urban experience can also be dirty, dangerous, crowded and noisy in which parks, gardens and green spaces can offer places of tranquility or places to be active and sociable, a chance to find a personal relief from the pressure of city life. As urban parks and green spaces are important landscape elements of livable towns and cities in which people want to live in, there is a need to address the issues of what will improve their live most which constitutes quality and what really matters to them in the places where they live in.

Today, the quality of urban green spaces receives increasing attention from the public especially in urban and residential areas. Public perception of landscape in general and green spaces specifically is playing an increasingly important role in this new millennium era. The psychology of seeing and attaching values to a landscape influences where people choose to live, how and where they work, their sense of well being and their sense of place (Appleton, 1996). Braudel (1994) observed that public parks, along with other 'social provision' have been provided over the last 150 years or so as a result largely of the perceived need to provide a solution to hardships of industrialised urban living and 'give the mass of people a better life'. Parks and open spaces in landscape are again been recognised as an important element in people's quality of life and it is increasingly accepted that they contribute to the sustainability of towns and cities (Gordon and Shirley, 2003; Safian & Nawawi, 2013).

Simply viewing the natural landscape is enough to elicit notable responses in humans. At the basic level of health and well-being it has been found that views of natural scenes can improve the recovery rates of patients (Ulrich, 1984). Lower rates of sickness were recorded for prisoners who had sight of nature (Moore, 1982) and children from kindergarten set in a natural landscape had higher attendance levels than their counterparts in an urban kindergarten without such access (Grahn et al, 1997). Other studies have demonstrated the reduced stress levels afforded in the workplace, by views of green areas (Leather et al, 1998) and by greenery in the city (Barker, 1997). The introduction of trees and grass into previously unplanted built environment has been

shown to improve both preference ratings and the public's perception of health and safety (Kuo et al, 1998). Kaplan (1983) found that the simple knowledge that 'natural areas' and 'good places for taking walks' were nearby was sufficient to promote higher levels of resident satisfaction, even if such areas were not directly visible from the respondents' dwelling.

Good Health via Landscape?

Green spaces are increasingly being recognised as having a range of positive benefits in the regeneration programme and deprived areas by enhancing people quality of life, transforming the environment, and attracting inward investment (DTLR, 2001). Even the speculative developers of the 18th and 19th centuries recognised the need for breathing space in towns (Benatsky, 1978). Accessible greenspace and a close proximity to nature have been shown to provide a significant cure to the pressure and stress of modern urban living. As little as three or four minutes in the company of trees and natural surroundings can be enough to provide measurable stress relief (Ulrich, et al. 1991). Hospital patients with a view of trees can suffer pain more easily and recover more rapidly, while commuters with a route to work through natural greenery will generally arrive less stressed, and work more effectively (Ulrich, 1984).

Jones, 2001 stated that according to Dr Anthony Frew from Southampton University there is a proven link between poor air quality and heart and lung disease which makes life miserable for very many people with the elderly suffering more than most. The fine sooty particles and nitrogen oxide gases which come from burning fuel oil and gas are the principal problem. Trees trap the dust and carbon particles and absorb harmful gases which is their leaves have a surface area as much as 12 times greater than the ground they overshadow. People who are recovering from major surgery have been shown to benefit from a view of trees. They need less pain relieving medication, they are better patients and they need to stay in hospital for a shorter time, so hospitals surrounding and convalescent homes with views of trees can improve both healthcare and economic efficiency.

Plants, Physical Activity and Therapy

Selection of plant materials in landscape planting design as growing, planting and caring for trees or vegetation is extremely therapeutic and it has been widely used to help people with physical disabilities especially for those patients recovering from strokes. Harris (2004) stated that the term therapeutic derives from the word 'therapy', which means 'the art of healing' or 'curative treatment.' The term can be described as an ingredient in the medical practice of a patient's healing. It can be referred to as a beneficial process that may promote overall human well-being (Marcus and Barnes, 1999). Harris (2004) also highlighted that according to Dr. John Upledger in Miliken, (1998), 'healing' refers to "what is done by the patient (or the patient's body) in order to resolve a problem of the body, mind or spirit". In contrast, the meaning of 'curing' refers to "what is done to the patient by the physician or therapist". Nevertheless, the term 'therapy' apparently refers to a variety of healing methods that are not used in most conventional medical practices. It is more accepted for medical practitioners who apply non-medical approaches as a method of healing.

Tyson, (1998) in Harris, (2004) has stated that “the simple truth is that the landscape surrounding us has a great impact on our sense of well-being”. According to Ulrich in Marcus and Barnes, (1999), a supportive outdoor garden and design may contribute to the whole approach of creating a total environment that may stimulate healing. Scenic views, listed plant materials, open lawn, specific garden flowers and water element in landscape design contribute to calmness and therefore will reduce stress and offer therapeutic benefits.

In addition to this, green surroundings encourage people to take regular exercise which is also beneficial. A gentle daily exercise is strongly recommended as a way of maintaining mobility well into old age. Footpaths which follow green and leafy routes are more sheltered, attractive and interesting. There is a strong case for landscape as major contributors towards a healthier lifestyle and therapeutic garden neither urban forest in landscape design and planning should increasingly been seen as an aid to preventive healthcare and a growing asset to our National Health? In 1996, the U.S. Surgeon General's Report on Physical Activity and Health stated that a sedentary lifestyle is a dangerous risk factor for disease. The good news is that even moderate levels of physical activity for people of all physical abilities will significantly reduce the risk of such chronic health problems as heart disease, diabetes, and some cancers (RGS, 1997).

The beneficial asset in physical activities in promoting healthy lifestyle would be as listed below:

- Energize and increase stamina and strength;
- Enhance mobility;
- Help prevent pressure sores;
- Help reduce spasticity;
- Help strengthen bones;
- Help control weight;
- Improve the appetite and digestion;
- Tone and strengthen muscles;
- Keep joints, tendons and ligaments flexible for easy, unrestricted movement;
- Improve heart and lung functions;
- Strengthen the heart and improve circulation;
- Improve blood pressure readings and glucose levels; and,
- Help balance and agility.

Among other benefits to individual are:

- Weight reduction
- Reduced tension and feelings of stress
- Improved well-being
- Enhanced self-image and self-esteem

- Improved physical function

International Practices and Recognitions

Australia

The role of the Australian Government National Public Health Partnership principles indicated that each community or population sub-group should have access to strategies, services and activities which optimise their health status which is determined by access to a healthy and safe environment including clean air and water, beside adequate food and housing. The Australian Government thereby provides for a national regulatory framework which ensures environmental health and consumer protection for the Australian people (NPHP, 1998). The local government interacts with public health activities involving environmental management, economic development, and public safety, maintaining roads, cultural and recreational landscape development, land use planning and provision of community services (NPHP, 1998).

America

“Meristem”, the botanical term, refers to specialised cells responsible for plant growth and regeneration. “Meristem” is an educational, not-for-profit organisation based in New York City. The organisation’s mission is to promote nature’s role in the improvement of human health and well-being through the development of restorative gardens in healthcare environments. The organisation work to unify the bodies of knowledge, standards of design and professionals required to successfully develop restorative gardens and landscape development that meet the needs of healthcare environments; to expand and improve health care services through the integration of restorative gardens; and to develop a critical body of physicians, architects, horticultural therapists, and other professionals committed to the improvement of patient environments and community public health through restoration of local environments. It provides resources for the design and development of restorative gardens, bringing health benefits to both people and landscapes.

United Kingdom

The Government’s Urban Green Spaces Task Force has a direct focus on parks and green-space provision. The outcome of its deliberations is likely to have a significant influence on future green space planning, funding and provision. In its interim report; Green Spaces, Better Places (DTLR, 2001), the Task Force reaffirms the need for a diverse range of well-managed green spaces, to serve the need of all people. The Government published its White Paper entitled Modernising Local Government in March 1999. It has an evolving regeneration programme, the imposition of redevelopment organisations with their wide ranging development briefs and planning powers have to some degree been replaced by new local regeneration bodies. These bodies are required to operate local partnerships with residents and business in order to fulfill the requirements of their funding stream, either through Single Regeneration Budget, Heritage Lottery Grant, and New Deal for Communities Fund, Neighbourhood Renewal Fund or other quasi-Government funding programme.

The involvement of the community in planning, designing and managing parks and green spaces is prescribed, to ensure that needs and aspirations are fulfilled. The Urban Green Spaces Task Force, rate safety appearance as being alongside a key criterion for the provision of better quality spaces. The PPG 17 consultation draft (DETR, 2001) state the Government's vision for an urban renaissance to be the provision of 'a high-quality urban environment that is attractive, clean, healthy and safe'.

Conclusion

The backbone of the community based primary health care system is the general practitioner. Doctors are seen by the community as the most authoritative source for information and advice on reducing health risks and for many provide the main source of public health education but today other source of information and technology such as landscape design specifically in therapeutic garden inspired by the Islamic garden concept does contribute to a healthy lifestyle.

In discussing the whole issues, it would be interesting to find out that measure and strategies are needed to enhance awareness among professionals and public on how landscape can improve health and benefit the environment for our homeland. Another perspective, it is time to introduce landscape design and management approach as part of medical care treatment in shaping people's quality of life. This paper has provided some indication and information which highlights the importance of landscape role in health and well being. Further research should focus on segments that were not represented here; measures and strategies to enhance awareness among professionals and public on how landscape can improve health and benefit the environment.

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