The impact of urban green spaces create a sense of security and promoting mental health in the community

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Abstract
Plants as the life giving entities have important role in mental and physical health of human. In the modern time with expansion of the cities and increase of industrial centers and living style change and decrease of social negligence about green spaces as the factor for mental diseases, altogether have been propounded for many psychologists and physicians. In this way considering green spaces is necessary to peace of mind. This article intends to study sense and visual capabilities of artificial green spaces using descriptive method and their effects on human. The results show that connection with green space directly or using senses can contribute to reach mental health. It is hoped this research can provide conditions to further researches.

Key words: *urban green spaces, architecture, health, mental, vegetation*

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Introduction

The influence of enlightened greenspace planning can be seen in some but not all of Australia's cities – notably Adelaide, Melbourne and Canberra. There have been recent suggestions that many contemporary planners and developers have deserted the "garden city" concept in favour of private greenspace. However, there is a considerable level of uncertainty about the impacts associated with the deterioration and loss of urban greenspace and the biodiversity these areas contain, particularly in relation to the sustainability and quality of urban life. In this paper we revisit the connection between people and nature in the city, through a focus on identifying spatial patterns of urban greenspace, health outcomes for people, and knowledge of parks and biodiversity. Instinctually, human senses and wants to go to the green spaces and nature and wants elements which produces peace and moves him toward god. This trend and relation has been emphasized in Islamic education. Going to gardens, parks, urban green spaces, give us happiness and peace and release us from depression and mental stresses of urbanization[1]. For a long time the position of green spaces as an important factor has been neglected and also there is so evidence about the importance of green spaces on physical and mental health of human and it is reasonable to consider the role of green spaces in our life. This research intends to introduce green spaces and their roles in health of humankind.In this research at first

health and its variables are defined perfectly and then green spaces are introduced and studied and eventually, the physical and mental effects of green spaces on health of humankind are described. The main goal of this research is introduction of covered aspects of the effects of green space on human health and regenerating connection between human and nature[2].

describtion

Increasing urban modern life and uncivilized culture of people leads to decrease communicate and social interaction of people and neglect public space for these social interactions. So that, today's in the cities especially in main cities, there is a little direct relation with nature or even no relation in this regard[3]. On the other hand with establishment of welfare state and considering citizenship rights and modern life style, the need of people for pastime and recreation is increased and this should be realized with developing green space and parks in the cities. Thus if the city is a cradle for human it would be green and joyful to reach peace and security. spaceMost research on urban green space and health has focusedon parks, with studies also examining green cover (Bedimo-Rung,Mowen, & Cohen, 2005; Kuo, Sullivan, Coley, & Brunson, 1998).Lack of park access has been linked to mortality (Coutts, Horner,& Chapin, 2010). Green cover has also been shown to protecthealth (Villeneuve et al., 2012). Additionally, parks often serve assites of physical activity, which is associated

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1.For example, Giles-Corti et al. (2005) outlined the importance ofattractiveness and size of open space. A series of studies in Perth,Australia (Giles-Corti & Donovan, 2002; Giles-Corti, Macintyre,Clarkson, Pikora, & Donovan, 2003), using cross-sectional surveysand data on environmental facilities, found that parks were morelikely to encourage physical activity if they were perceived asesthetically pleasing (minor traffic, sidewalks, trees, retail shops).Veitch, Ball, Crawford, Abbott, & Salmon (2012) studied parkuse as well as physical activity in Victoria, Australia, before/afterimprovements, finding significant increases in park use followingimprovements.

2. Particular attention has focused on parks and the obesity epi-demic (Ogden, Carroll & Flegal, 2008). Obesity can be detri-mentalto children's health (Dietz, 1998), and increase the probabilityof adult obesity (Freedman, Mei, Srinivasan, Berenson & Dietz,2007). While genetic factors probably contribute (Stunkard, 1991),rapid increases in obesity suggest that individual behavior patterns,including low levels of physical activity, appear to powerfully influ-ence obesity trends (Hill & Peters, 1998). Children with more accessto parks and recreational facilities are more active than childrenwith less access, and most results for adults are similar (Diez Rouxet al., 2007; Timperio, Salmon, Telford & Crawford, 2005).

3.In addition, psychological well-being is empirically linked tourban parks and green space (Ernstson, 2012). A park experience-has been shown to reduce stress (Ulrich, 1981; Ulrich et al., 1991;Woo et al., 2009), and green space can afford urban residents oppor-tunities to encounter plants and animals as well as opportunitiesto recuperate or experience solitude (Fuller, Irvine, Devine-Wright,Warren, & Gaston, 2007). Park visits can also rejuvenate residents,enhance contemplation, and provide a sense of peace and tranquil-ity (Kaplan and Kaplan, 2003; Song, Gee, Fan, & Takeuchi, 2007).

with enhanced healthand reduced risk for all-cause mortality and many chronic dis-eases (Anon, 1996; Barton & Pretty, 2010; Bush et al., 2007; Caseyet al., 2008; Grahn & Stigsdotter, 2010; Hartig, 2008; Kuo, 2001;Woodcock et al., 2009). Indeed, a large number of studies demon-strate linkages between park proximity and physical activity (forexample, Brownson, Baker, Housemann, Brennan, & Bacak, 2001;Cohen et al., 2006, 2007; Diez Roux et al., 2007; Evenson, Wen,Hillier and Cohen, 2013; Gordon-Larsen, Nelson, Page, & Popkin,2006; McCormack, Rock, Toohey, & Hignell, 2010; Sallis, Floyd,Rodriguez, & Saelens, 2012).

This view that urban green spaces affect on behaviors of citizens and they can be used to regulate behavior is acceptable and it is possible that to use planning and designing to provide conditions to promote moral and social stages in society, so that, going to nature can foster personality.The effect of perspective and nature of mental health has been increased in recent decades and many theories mentioned in this regards such as stress improvement theory of Ulrich and he believes that the natural perspectives reduce stress, while the existing made perspectives not only avoid to prevent stress but also promote stress.Crime and commitment of crime are modern challenges and affect on thousands citizens' life annually. Threats and violations against people and their properties create macabre fear in the society. Crimes such as robbery, violations and rapes and murder and kidnap are considered as serious threats against safety and security of society[1]. Fear resulted from these crimes can restrict people in the society and especially some of social groups are susceptible against crime such as old people and women and children and teenagers, so it is required to have proper guidelines to fight against crime.Quantitavely,

insecurity can be estimated based on rate or number of violations and crime scenes and nature and gender and age of victims.What is understood mentally about insecurity in the society usually is along with anxiety and challenge especially in public spaces of industrial world such as parks, subways and residential complexes are observed perfectly. Insecurity, in despite of police control is considered as dangerous item in the society.It is evident that the presence of people is important in public places of the cities and currently for different reasons, street is nit considered as a safe place for pastime because much time of young people is spent on the streets and if streets have proper conditions for pastime and recreation according to values of society, the presence of people shall revive the streets.As it is shown in figure 1, to reach security and decrease violations on green spaces, there should be integrated control and management on these spaces and this shall be realized by external factors. Redressing park-poverty in communities of color and/or lowincome households can, however, create an urban green spaceparadox. As more green space comes on line, it can improve attrac-tiveness and public health, making neighborhoods more desirable. In turn, housing costs can rise. Such housing cost escalation canpotentially lead to gentrification: the displacement and/or exclu-sion of the very residents the green space was meant to benefit. Inturn, residents may face higher rents and thus become precariouslyhoused, while those who are actually displaced may be forced toleave their communities, ending up in less desirable neighborhoodswith similar park-poverty problems. This paradox has negativepublic health implications, not only because of continued parkpoverty but also because displacement and precarious housing sta-tus themselves have negative public health

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1.Louv (2005) contends that children who lack access to urbangreen space suffer from a wide range of behavioral problems.Fuller et al. (2007) in Sheffield, England, found positive associationsbetween species richness and psychological well-being, and Faber-Taylor, Kuo, and Sullivan (2001) found that children with attentiondeficit disorder who were active in green space had reduced symp-toms. More generally, several studies find that interaction withnature and animals is important to child development and well-being (Kahn & Kellert, 2002).
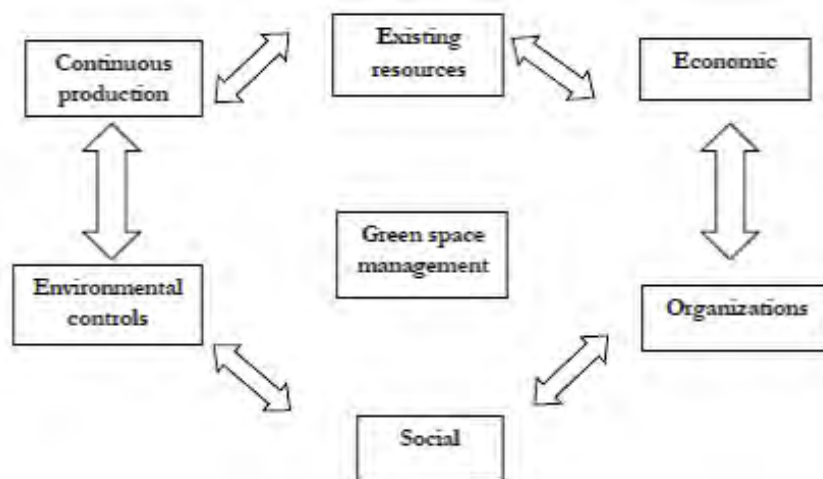
▲ Diagram 1. Aspects of green space; source: authors.

implications (Bentley,Baker, & Mason, 2012; Centers for Disease Control, 2011).

Word definition of health

Lexical root of English word (Health) is observed in words such as HAELTP, HAELTH and HAELEN (HEAL) of old English and old German words HEILIDA and HEILEN. Graham has combined these lexical roots with HALIG and HEILIG which means saint and holy so it can be said that health means being saint. In this order it includes physical and intellectual properties.

Health definition

Health does not mean absence of disease or disability and this means that the health provides conditions to have dynamic life. Human's soul is the origin of energy which it produces interesting and motivation. The main goal of mental and physical health is to connect correct relations between people. To have comprehensive knowledge about health and its origin depends on recognizing humankind perfectly. It can be said that the health is considered as multi dimensional concept with spiritual meaning. Regardless of measurement strategy, there is abundant evi-dence of environmental injustice in the distribution of urban greenspace. A variety of other studies show that racial/ethnic minoritiesand low-income people have less access to green space, parks, orrecreational programs than those who

are White or more afflu-ent (Abercrombie et al., 2008; Dahmann et al., 2010; Jenningset al., 2012; Johnson-Gaither, 2011; Landry & Chakraborty, 2009;Leslie, Cerin, & Kremer, 2010; Sister et al., 2010; Wolch, Wilson,& Fehrenbach, 2005). In addition, studies of public and nonprofitfunding for urban parks and recreation indicate this also followsrace/class contours, with low-income communities of color havingfar less to spend on parks and recreation and having less non-profit resources as well.

Quran view about health

If we think to Ayats of Quran we will find that Islam has emphasized on health perfectly and it has been mentioned in Quran that one of the names of god is the salam or greeting and this means that god is perfect and the origin of health for people. Islam is the sole origin accepted by god because its root and principle is based on health and security and all believers are invited to Islam religion and it can be said that the Islam is the only religion which guarantees material world and after world for human.In the view of holy Quran, physical health is multi dimensional issue and nutrition and exercise are considered as important items and emphasized by holy Quran. In Aye 31 of Sureh Araf it is mentioned that: people wear your best clothes at time of pray in the mosque and eat and drink sufficiently without excess

Health dimension	The usual health dimension is physical health which it is resulted from proper performance of body organs. Biologically the proper performance of cells and organs and their coordination show the physical health.
Mental dimension	WTO defines mental health as: mental health is embedded in general concept of health and the health means the perfect ability to play social and mental and physical roles. Ginsberg defines mental health as domination and skill in relation to environment especially in life, love, work and fun
Spiritual dimension	Some of the symbols of mental and social and physical disorders are feeling emptiness and useless and mental weakness which are resulted from lack of Spiritual dimension in people. Faith, having goals in life, morality, cooperation, considering spiritual issues reduce anxiety and mental weakness. Some of the symbols of mental and social and physical disorders are feeling emptiness and useless and … which spiritual issues reduce these disorders.

▲ **Table 1. Health dimensions; source: authors.**

Green space				
Urban green space			Non urban green space	
Public-parks	Semi-public-environment of hospitals	street	forests	gardens

▲ **Table 2. Kinds of green space; source: authors.**

Green level				
Urban green level			Non urban green level	
Public	Street	urban	farms	pastures

▲ **Table 3. Green level; source: authors.**

because god hates people who do excess.Holy Quran in its Ayats introduces humankind with mental health with believing to god who has chosen the best way in life to reach salvation near by god.Holy Quran in Aye 10 of Surreh Baghareh notes about the concept of mental disease.Psychoneurosis is observed not only in behavior but also in faith and belief. Since that personality balance is observed in believing to god and performing good action so imbalance in them causes Psychoneurosis and this shows the mental disorder in person.

Mental health definition

WTO defines mental health as: mental health is embedded in general concept of health and the health means the perfect ability to play social and mental and physical roles and health does not mean lack of disease or retardation. Ginsberg defines mental health as domination and skill in relation to environment especially in life, love, work and fun.

Urban green space

This as a part of urban open space is the main factor in urban structure and improving ecologic conditions and having fun and recreation to increase quality of urban environment. On the other hand it can be said that, the main goal in designing green space is achieving its mental and social effects in creating close relation between human and nature. So social -mental aspect is an important function of green space .

Non- urban green space

It is a space without urban function, although it is located in urban limitation, but due to its function it may be considered natural such as natural or artificial forests like gardens and artificial forests.

Sensitive usage	Away from work and living problems, feeling loneliness and peace
Intellectual usage	Studying nature, studying natural perspectives history in the life, obtaining new and different capabilities
Social usage	To befriended with other people in natural places and feeling cooperative sprit with other people and responsibility in protecting local natural perspectives
Physical usage	Presence in fresh air and feeling joy and smelling flowers and listening to songs of the birds

▲ Table 4. usage of green space; source: authors.

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Quran view about vegetation and green space Holy Quran considers plants and vegetation as joyful items and in Islam many recommendations have been mentioned about going and watching vegetation and green space because these green spaces remove depression and strengthen wise and insight of man. Plants and trees have important role in human life. Air filtration, balance of environment temperature, soil protection and others, plants foster the mind of human. The researches of psychologists in this regard show that relation of nature and human can peace the soul.In a narration, Imam Kazem says that; watching green space and farm and forest clear the sight.

The effect of nature on mental health

The relationship between human and nature has been visible during history, thus human can not live without nature. Since old time, people go to nature to obtain peace. Perhaps they did not know that, this huge energy source is the origin of physical and mental peace and comfort. When people went to nature they experienced spiritual feel and situation and in fact ugly things and pains and diseases vanished in the nature and human reached peace. In modern time with heavy feeling and outbreak of diseases and physical and mental disorders for human are due to distance between green nature and human.Recently, many studies have been conducted about relation of human and the nature. Lowed and Gowider in their study in UK, prove that connecting people to nature is useful. Mostin has studied the reasons of positive effects of natural perspectives on human and divided useful result in to four cat-

egories.

It seems that observing natural perspectives plants and…has effects on mental health of people. These effects can be visible among people who have permanent relation with nature (villagers) rather than urban dwellers. These people have high resistance against physical and mental diseases and less become depress. Another point…is that they do horticulture activities in the nature. Direct relation with plants can improve and promote physical and mental health in human. For example, existing plants and flowers in work environment and also natural perspectives boards gain mind peace in people.

Plants' characteristics and their effects

Green spaces in the cities regardless ecologic productivity, have many useful effects in social and psychological grounds and in case of weak performance in designing and developing these spaces, they may have negative physiological effects such as air pollution and gradual mental disorders for citizens. The effect of perspective and green space on physical and mental health has been considered in recent decades and many theories propounded respectively such as stress reduction theory of Ulrich, who believes that natural perspectives reduce stress, while the existing perspectives not only avoid to reduce stress but also they cause stress.In addition to the role of the plant on the earth as a factor of life they can be effective in planning and strategies. In planning, plants are considered as the main parts of perspectives and natural environments. In project scale, vegetation has important roles and it can

categories	Sub categories	kinds	Physical characteristics	Mental characteristics	Space characteristics
Visual characteristics	Geometric and other shapes	Rounded cone and pyramid shape	Promoting understanding level of visual stimulation	Peaceful and removing boredom and depression	Emphasizing on general direction and usually they are used to background and are considered as connector. Official emphasizing on strengthening space and also emphasizing on horizontal direction and strengthening structural forms and indicating focus on environmental factors of space composition and asymmetrically to high dynamic environment
	No geometric shape	Combined irregular forms			
	color	Flower Fruit Leaf	Attraction and visual stimulation and promoting understanding level due to seasonal changes	Mental peace and strengthening sprit	Spatial attraction Reducing uniqueness Contrasts of colors Light reflection in the space Creating color harmony in the space
	shadow		cold		
Dynamic characteristics		Wood Flower Leaf fruit	Dynamic sense stimulation	peaceful	
Taste characteristics			Health Taste sense stimulation	Feeling health	
Environmental characteristics	Arrangement of plant based on the size	Providing required oxygen for cold	Comfort and peace		
	Density texture		Joyfulness and avoiding understanding error		Attracting birds Reducing noises Reducing air pollutions Air filtration Environmental temperature balance Soil protection Space decoration Creating nice perspectives and views Seasonal changes cause diversity in the space

▲ Table 5. characteristics of green space; source: authors.

restrict space and it can add color to perspective pr prevent strong winds and storms.Researches show that, looking at natural perspectives can be considered as a cure for people without performing activities in green spaces.

Plants form

Using kinds of forms of trees is performed by particular purpose in planning. Forms of trees inspire especial senses in the mind of observer and affect mentally. Loose form of trees due to having soft branches move around easily with breezes and are proper for places dedicated to peace. Cone and pyramid forms with even shape to upside are strong and proper for rocky places. Wide forms are proper for plains and trees with box form are proper for valleys and uneven grounds.

Color of plants

Color is reflected from the light from the surface of objects which received by eyes and creates mane senses in human. Color in the plants relates to color of flowers and fruits and leaf and bark and branches. Color of flowers is dynamic and has short life. Color of fruits is different from leaves and even completes them and eventually increases visual quality of plants especially at time of leafless situation and when fruits remain creates splendid perspective. Looking at green trees and colorful flowers make human comfort and peace and researches shoe that looking at green color of plants cures mental disorders. This color strengthens sprit and pride and self reliance and power in bad situations. So this is effective in peace and also it promotes patience. In fact using natural plants cause comfort and peace for people.

Kind of plants

Urban green spaces with various kinds of plants have proper effects and boosts and strengthens citizens.Plants are considered as important factors in attracting birds and planting trees and plants and bushes, different birds come to the environment and joy and splendid are realized. Certainly nice sounds of bird's songs increase the effectiveness of the envi-

ronment. So with selecting proper vegetation, some particular birds and animals can be chosen which are desirable and lovely for people. Moreover planting medical plants in different climates can be effective in selecting plants.

Plant texture

Plant texture is a quality which it is recognized with seeing and touching, different textures can create sense of smoothness or toughness, light or heavy sense in people. In fact, texture indicates happy, comfort and easiness and makes observer to be elegant respectively. While tough texture affects on observer seriously and focus on location of implantation.

Other considerations

In addition to the mental effects and peace which are resulted from going to nature, scientifically following items can be considered; visual effect of the plants and looking at natural places reduce stress and increase joy and minimize blood pressure and aggressive behaviors. Also trees such as pine and walnut trees release phytoncid in the space which affect on human to become happy so that, this can balance two hemisphere of the brain and make human peace.

Conclusion

Since old time, human trended toward machining life and urbanization[1] due to its welfare. He neglected green space in his life. While the both artificial and natural spaces must be balanced together in human life to provide perfect social, mental and physical welfare for citizens.As mentioned above, it can be concluded that gong to green spaces and looking at natural perspectives and their seasonal changes will increase understanding level of human and this promotes mental and physical health of human.

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