Criteria for Public Open Space Enhancement to Achieve Social Interaction: a Review Paper

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Abstract.
A This paper presents a various literatures, studies, transcripts and papers aiming to provide an overview of some theories and existing research on the significance of natural environments and green open spaces to achieve social interaction and outdoor recreation. The main objective of the paper is to identify the factors that affecting social interaction in green open spaces, through proving that an appropriate open spaces is important to enhance social interaction and community. This study employs (qualitative) summarizing content analysis method which mainly focused on collect and summarizing of documentation such as transcripts, articles, papers, and books from more than 25 source, regarding the importance of public open spaces for the community. The summarizing content analysis of this paper is the fundament for a qualitative oriented procedure of text interpretation used to analyse the information gathered. Results of this study confirms that sound social interaction need an appropriate physical space including criteria of: design, activities, access and linkage, administration and maintenance, place attachment and users’ characteristics, also previous studies in this area have a health perspective with measures of physical activity of open spaces in general.

Keywords: social interaction, open spaces, natural environments, outdoor recreation, content analysis method.

1. Introduction

Social interaction also can be described as an interchangeable sequence of dynamic exchanges through which individuals can attach meaning, interpret, and respond. People who report having more satisfying and active social lives tend to report feeling better about themselves and their lives and peoples how enjoyable interactions were self-assured, life satisfaction, and psychological well-being [21]. While open spaces one of the most important areas in the city, it provides different recreation and sport activities for children and aged, it also enhances physical, social, mental and environmental components for cities and citizens [5].
Urban public open space is also a main component of urban fabric that caters to the urban public daily life. The amount of green space in a neighbourhood is significantly correlated with the health of its residents [6]. Social interaction is a common social issues that exist in in most societies nowadays, so it has to be highlighted this issue and try to deal with it in urban and architectural perspective. According to previous literatures and studies to provide a brief on significance of open space in social interaction and recreation. Almost most studies confirm that social interaction need an appropriate place to occur, also there are different factors affecting social interaction in the green open space such as the design, components, distance, location and facilities of open space [9]. Types and nature of recreational and physical activities within this space also enhance the role of open space in social interaction. So the objective of this paper is to identify factors affecting social interaction of users in green open spaces in order to provide proper foundations and standards for open space design through implementing qualitative method to answer the following questions:

I. What are the criteria of green open spaces to enhance social interaction?
II. How can achieve social interaction in the urban fabric?

2. Social Interaction and Green Open Space

The development of social relationships in urban scale should begin with careful attention to specific spaces by implementing and using interaction design approaches, specific spaces also used to effectively address the sociocultural relationships of the people [19]. So to achieve the social interaction must provide physical space, thus parks have crucial roles to develop and enhancement cities as well as social relations, so it’s not only a place where people join the nature but also communicate each other socially and culturally [15]. Open spaces wherever people are present, other people are attracted to that location and get together, move among each other and looking for a place for themselves among others, then new activities begin. Looking, listening and talking are the activities which determine the quality of open space. Good space with good facilities plays an important role in the formation of such activities and elements. These spaces reinforce social contacts and meet their psychological needs of residents [23].

Elements of social open space include: walking trails, horse trails, gardens, children's play areas, sitting areas, and green space. While open space at all levels in the hierarchy plays a role in providing open space opportunities for the surrounding community, while the hierarchy of open space levels ranging from: the neighborhood space, through the sub district (a catchment of three neighborhoods), district (usually containing sports facilities, a catchment of six neighborhoods) and regionally spaces to the state level spaces [7-11]. Pocket park is a small outdoor space, provide a safe and inviting environment for surrounding community members, it also meet a variety of needs and functions e.g. small event space, play areas for children, spaces for relaxing or meeting friends, taking lunch breaks, etc. [7]. Social relationships also vary according to the age, gender and place, where place element is a key factor to determine the nature of social activity for all ages. While public spaces allow people to meet on ostensibly neutral ground in planned and unplanned ways, to interact with others within the context of the whole community, so public spaces can contribute to the cohesion of communities [12].

Individual usage and social interactions in public spaces are influenced by many factors, including how the spaces connect and the design, maintenance and management of the natural and the built environment.

Bekker describe that how to create a social communication in open space through interactive play objects by describing some design values that apply for designing playful interactions for social interaction and physical play [2]. His study highlights that community (players) in recreational zone (recreational parks) can create a wide range of physical games and being shared and participated as a type of social interaction (fig. 1). The importance of this study also concentrate on its aims which invite people especially children to replace the television, computers and video games with physical games that participate with other people in open space to stimulate social interaction [2]. The woodcarving, components and decoration also have considered as an important component in
traditional Malay vernacular architecture and it was playing their appointed roles in the complex network of social relations and the value system of the Malays so decoration and motifs of the spaces influence special social interaction [26].

![Figure 1. Patterns of Players Interaction.](source: Bekker et al., 2010)

### 3. Criteria for Enhance Green Open Spaces

Layout plan and design of outdoor spaces has a great role to lead individuals to outside spaces, socializing and being together, also space design tools can be used to provide social interaction and the feeling of being a community especially in transformation places [30]. “Community” is one of the most important concepts taken up in connection with surroundings of the house, so “a good society designers” believe in the necessity of changing the spatial structure in order to change life and it is possible to create a new social order in the city through spatial arrangements [30]. While complex social diseases can be cured through different house surroundings, parks and new spatial arrangements [30]. Open spaces are also a kind of crystallization of social life where the citizens are living. The inherent behaviour is closely associated with the environment, so organizing human behaviour and its application in time and space, is the most important factor in designing open spaces. Human being is the main component of this space which credits the space by their values and norms [23]. The socio-demographic characteristics of a neighbourhood affect how residents interact with each other in outdoor spaces. Factors such as: age, marital status, and presence of children at home, owner-renter status, length of residence, educational attainment and annual income are relevant socio-demographic characteristics presumably associated with social interaction [10].

While to achieve successful public park, good of access and linkage (GAL) should be the main factor in designing a park follow by sociability (SOC), user and activities (UAC) and degree of comfort and image (DCI) factors [26]. Park is an important space in the relationship of man and nature to promote and provide space for physical activity, health behaviour, and can reduce some diseases such as diabetes and certain cancer, also parks provides the benefits of community interrelationship, as well as increase the value of the property, so public parks have always been an important component in an urban area [26]. A high-quality outdoor space can enhance social interaction by attracting people to come and stay for some time. The more time people spend in outdoor space, the more likely are they to engage in activities [16]. The existence of interesting objects, features or elements, such as artificial water scenery and properly arranged seats, children playgrounds and recreational facilities also encourages the use of public space and enhances social bonding among residents [13-16].

With the shift to a service based society, providing opportunities for outdoor recreation that enables mental and physiological self-regulation has become an increasingly important landscape function [3]. The quality of the nearby recreation area is at least an as important condition for these benefits as the easy access to these areas [3]. Inhabitants’ satisfaction with the recreation area, their activity and interaction level within the recreation areas as well as the time spent in the recreation areas appeared to
be more relevant predictors for these benefits than the frequency of visits in these areas. While recent research has provided considerable evidence that visits to near natural everyday landscapes promote psychological, well-being and physical health [3]. Holland suggests that security and safety are an important factor in open spaces especially for older people, while for others risk-taking is essential to ways of living [12].

The role of place attachment in making places more meaningful, also the emotions and a sense of pride keep the place as the center for personal and social engagement for social interaction [29]. While the role of place attachment is important in park utilization and social interaction (were conducted to examine the role of place attachment in park utilization and social interaction, so the study found that frequent visits, proximity to residences, and the landscape features contribute to the development of attachment to a place) [29]. The significance of the park as a social integrator could be unfulfilled if the functional attachment to a place is weak. Urban spaces and places should belong to the public, therefore, they should be shaped for the good of the people physically and emotionally. The green spaces function as community parks in the city have a great potential to develop a social environment. The parks should be inclusive and meaningful to the life of the members of the community amidst the egocentric nature of the modern society. Green recreational places are the most important places to generate happy and healthy urban inhabitants [29].

4. Benefits of Green Open Space

Godbey considers that how being outside in natural surroundings may improve health and how outdoor physical activities benefit participants [9]. Particular attention is given to children’s health problems that can be mitigated through outdoor play, sports, and nature study [9]. His study also confirmed a link between physical activity that takes place outdoors and positive health outcomes and also an association between an indoor, sedentary lifestyle and negative health consequences. There is also evidence that both being outdoors and viewing natural scenes can reduce stress [9]. Outdoor recreational activity is helping to mitigate health consequences associated with sedentary behavior. Enhanced understanding of socio-demographic differences in physical activity (PA) location preferences could therefore contribute to health promotion [18]. While the environment surrounding residences and its recreational and commuting opportunities are believed to affect human health and well-being, provided scientific evidence for the mechanisms of influence of the types of environments on human well-being, this study examined how the presence of and access to green spaces is related to the level of physical activity and self-rated health (fig. 2) [22]. The presence of an access to green space is evident in the suburbs, where outdoor recreation was related to leisure time physical activity and to self-rated health. While easy accessibility to green spaces should be an important objective in the management and planning of urban and suburban forests and other green spaces [22].
Figure 2. Environments and Human Well-being

Some studies also indicate that the decline of social life in housing estates is closely related to the design of communal outdoor spaces, while the spatial arrangement of residential area has been found to enhance social interaction among residents and influence their activity patterns [1]. Walking around a small group of houses to sit in a confined space were significantly related to social interaction and friendship formation. While close-to-home recreation opportunities are particularly vital for older people [1]. There is a need for better collaboration between park and protected area and health institutions, and effectively integrate empirical evidence into relevant policy, planning and management, where there are a positive links between human contact with nature and health and well-being. The role of parks also can be summarized in term of five different components: physical, mental, spiritual, social and environmental [24]. Open spaces are also providing opportunities for growth, creativity, fosters social interaction such as: communication, relaxation, entertainment and a place for circulating and cohesion residential site, are quite effective in reducing pollution and improving the environment [23].

5. Factors Affecting Green Open Spaces

Climate change is one of the most pressing global environmental issues facing the world today and one that has major social, economic and environmental repercussions [27]. The majority of visitors are concerned about climate change in a national park they visit, and would support agency efforts to mitigate possible climate change effects [27]. So it should contemplate differences in perceptions of the effects of climate change and travel behavior according to visitor characteristics e.g. age, gender and market segments. Other studies state that urban parks built in the early period of the cities were designed as places fully integrated into the urban fabric, where people from all walks of life can use freely, encounter others, learn from each other and develop, the parks built under the current ideology aren’t [8]. With the changing of the existing ideology, the urban parks which were built to design a modern urban life have become highly commercialized and vehicles to obtain economic benefits. Owing to their social, economic, political, and ideological meanings, public spaces are convenient tools for urban renewal strategies [8]. While according to Buta attachment must be discussed as having implications for pro-environmental behaviors directed at protecting natural resources and informing sustainable recreation and ecosystem management [4]. Place attachment plays a determining role in residents' behavior toward engaging with the park. They also mention the importance of understanding the social environment within communities proximal to a park and how social perceptions can shape
attachment to a protected area with implications for pro-environmental civic engagement beliefs and intentions to sustain natural resource protection, where there is a strong relationship between community attachment, behavioral beliefs and behavioral intentions [4].

Figure 3. Mediation of Place Attachment

6. Methodology of the Paper

The main objective of the paper is to identify the factors that affecting social interaction in green open spaces, through proving open spaces with an appropriate criteria are important to enhance social interaction and community. So it is necessary to answer the following research questions: 1) what are the criteria of green open spaces to enhance social interaction? and 2) how can achieve social interaction in the urban fabric?

This paper employs (Mayring, 2000) recommendation to design the method of the paper while data obtained from more than 25 source varied among articles, researches and books, regarding the importance of open spaces and green area for the community and interaction. Summarizing content analysis is a tool of research methodology used to determine the presence and meaning of concepts, terms, or words in one or more form or structure of the information. This systematic and replicable technique allows for compressing many words of text into fewer content categories on explicit rules of coding in order to allow researchers to make inferences about the author (Mayring, 2000).

7. Discussion

Results of the content analysis regarding to the previous studies about the importance of green open spaces to enhance social interaction through implementing an appropriate criteria of this spaces. So findings of this study attempt to answer the paper questions and achieve its objectives. Finding of the study confirms that public spaces allow people to meet on ostensibly neutral ground in planned and unplanned ways, to interact with each other within the context of the whole community, then public spaces can contribute to the cohesion of communities, also the criteria of that open space could determine the nature of social activity and interaction. Previous literatures, researches and studies have different opinion about the key factors and criteria of open space to enhance communities; for some good facilities and elements plays an important role in the formation of open space, others state that design and layout have a great role to lead individuals to outside spaces [30]. Users’ characteristics in open spaces are also an important criteria including; age, marital status, presence of children at home, educational attainment and annual income. While good of access and linkage should be the main factor in open spaces design follow by sociability, activities and degree of comfort are the key factors according to [26]. A high-quality outdoor space also can enhance social interaction while nearby recreation area with easy access is at least an as important factor of open spaces [3] also role of place attachment is important to make open places more meaningful. While security and safety are an important factor in open spaces [12]. So individual usage and social interactions in open spaces are influenced by varied and different criteria, the following criteria
identify an answer for the first question of the paper about the criteria of green open spaces to enhance social interaction:

i. Design, scenery and image of the open space.

ii. Elements and quality of open space.

iii. Activity, and play object of the open space.

iv. Good access, connect and linkage of the open space.

v. Users’ characteristics and interest.

vi. Place attachment of the open space.

vii. Administration and maintenance of the open place.

viii. Safety and security of the open space.

Figure 4. Means to enhance social interaction in Urban Fabric
Source: S Salih & S Ismail, 2017

8. Conclusion

The research results indicate that one of the means to achieve social interaction is to provide an appropriate space. Criteria and components of green open space are also an important mean to achieve sound social interaction including, design, activities, elements, access, users’ characteristics, security, administration and maintenance and place attachment of open spaces and parks. It has been mentioned the benefits and importance of social interaction in green open spaces as well, including; improve health and wellbeing, sedentary behavior and reduce stress, enhance socio-demographic differences, urban renewal strategies, economic improvement and raise the value of property.

Therefore the results of this study prove that achieving green open space is an essential to enhance physical, health, mental, social, environmental, and aesthetic aspects for residents and residential area, thereby encourages social interactions in the city between citizens through implementing an appropriate criteria and components in that space. The results of this paper are useful reference for urban and landscape planners, architects, social psychologist, and researchers in this fields. That will be in the line with the aim of this paper to contribute in outdoor recreation and relaxation development fields and highlight the role of open spaces in social development, so the significance of this paper lies in linking social-psychology to architectural research.
9. References

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