

Assessing the Needs for Quality Neighbourhood Parks

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Abstract: The understanding of needs aspect is important. A lot of people share common needs, but by identifying each person's unique needs will help answer why people use a particular space in the first place. Various studies also confirms the link between high quality green spaces with the increased property value; benefits in improving the image of an area as to attract investment; contribution to biodiversity; contribution in promoting physical activities and the benefits to health; and finally overcoming the anti-social behavior through design and management. The purpose of this review paper is to help fill in gaps that more methods are required for evaluating projects so as to obtain high quality evidence for better outdoor recreational venues such as neighbourhood parks. This review suggests that natural settings, safety, aesthetic appeal, convenience, psychological comfort, and symbolic ownership, policy on use, cost and interaction with natural environment are significantly important to park users' needs attributes relating to the design of a neighbourhood green open space. This paper provides a critical review of past and current research and its theoretical fundamentals on park users needs for a successful or a quality neighbourhood green open spaces. It should be of interest to landscape architects, park designers, urban designers, city planners, architects, developers as well as any other professional involved in the development of new residential neighbourhoods.

Key words: Needs, Quality Neighbourhood Park, Green Open Space, Malaysia.

INTRODUCTION

The needs for parks have long been realized and certainly have been discussed and explored extensively looking at a wide context in the past decade. In this paper, Neighbourhood Park is seen as alternative venues for urban residents' gateway. Parks are designed for recreation and can give enormous benefits to the neighbourhood and community by improving health, social well-being and enhancing enjoyment of the local environment (McRobie, 2000; Christiansen, Conner and McCrudden, SUPER group, 2001). Similarly, benefits of leisure also cover physical health, psychosocial well-being, self-actualization, spirituality and self-identity, family bonding, child development, environmental education and social skills development (Veal and Lynch, 2001). The important role of urban open spaces is recognized both in the character and the life they bring to towns and cities around the world. Urban open space must provide place for meeting, whether for strangers or a person to be alone and for those who can transcend within the crowd and be anonymous (Ward Thompson, 2002).

Today, all categories of open spaces have different kinds of opportunities and constraints. Several research has been identified, exploring and identifying the needs and preferences as well as the effect of the perception and recreational use of users including parents and children toward park facilities, trails and its surroundings (Linsey, 1999; Bjerke *et al.*, 2006; Arnberger, 2006; Tucker *et al.*, 2007) towards achieving a quality park or in this paper it is specified as, Neighbourhood Park. As stated by (Gobster, 1995), more research is needed to understand how location, size and number (Lo, Yiu and Alan, 2003), design and management of trails and open spaces affect use patterns, perceptions and preferences of users. Enhancing the quality of open spaces which include natural features and provision of social interaction as well as reducing the level of annoyance will help to improve the quality and access to neighbourhood parks which will directly contribute to the increasing amount of outdoor activity especially among older people (Sugiyama and Ward Thompson, 2008).

The purpose of this review is to help fill in gaps as elaborated by (Bell, Hamilton, Montarzino, Rothnie, Travlou and Alves, 2008) in a study which stated that more methods were required for evaluating projects so as to obtain high quality evidence for better methods of action research. They also mentioned that, more research is needed to develop practical planning tools and decision support system which like in this review is trying to assess quality of Neighbourhood Park through understanding of park users' needs. As suggested by (Crowford, Timperio, Giles-Corti, Ball, Hume, and Roberts, 2008), more research is needed to examine relations between the quality of parks, as well as park features, and other important determinants. That is the reason, why the goal of this review is to understand the strength of interrelationship among the constructs of quality neighbourhood

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park with the current park users outdoor recreational needs. It should better equip park managers and designers to develop and manage neighbourhood parks. It is important to focus on enhancing the quality of open spaces, including their natural features and the provision for social interaction (Sugiyama and Ward Thompson, 2008)

A study in UK by (Williams and Green, 2001) reviewed the literature on public spaces and local environments and they found several key factors that undermine public spaces, and this includes the undermining of the quality of public spaces or its use. Among the key factors were traffic, business activity, anti-social behavior and crime, poor design, conflicting roles and privatization of the public realm. In addition, another study, also in UK, stated that 'design often lies at the heart of what makes a successful urban green space'. Therefore, design is also a key part of tackling many of the barriers to use of urban green spaces (Dunnet, Swanwick and Woolley, 2002). Therefore, this paper aims to: a) review the literature to consider the definition of quality in the context of neighbourhood park settings and that quality principles are important in evaluating the success of a neighbourhood park, b) to identify the need factor among park users for their outdoor recreational venues and

For the purpose of this review, several inclusion and exclusion criteria will be addressed. This review will only include studies that are reporting the impact or effects of green spaces on quality or success of green open space within residential areas and human needs factors or user focus or visitors in general. Exclusion of this review include studies that are within the topics of environment, air or scenic quality, service and performance quality in general, health behaviours (physical and social). This study will also only include spaces mentioned in studies on neighbourhood parks, residential open spaces, residential green, residential green open spaces and neighbourhood playfields but exclude urban parks in general, backyards and private gardens, forest and national parks, wilderness and wetlands, greenbelt and country parks.

Researches on Quality:

In the early work of Parasuraman (Zeithaml and Berry, 1985), quality was defined as the 'gestalt' attitude toward a service which was acquired over a period of time after multiple experiences with it' (cited in Baker and Crompton, 2000; Manning, 1986; as cited in Mackay and Crompton, 1990), suggested that high quality service in outdoor recreation exists when recreation opportunities meets the needs of its visitors. It is also the degree to which opportunities satisfy the motivations for which they were designed. Hence, the challenge of providing high quality recreational services would become less difficult when agencies are aware of what their patrons desired from their services (Mackay and Crompton, 1990).

In addition, the value of public open spaces increased because they have the potential to enhance the positive qualities of urban life in term of opportunities, physical settings, sociability and cultural diversity (Burgess, Harrison, and Limb, 1988; Willie, 1992) argued that quality is about people and attitudes. Quality is not solely about techniques and procedures but includes people who actually use the techniques or procedures in the context of 'total quality management.' Among definitions of quality given by Willie are 'fitness for use,' 'conformance to requirements,' continuous improvement,' and 'delighting the customers.'

(Smith, Nelischer, and Perkins, 1997) assessed physical elements that contribute to the quality of a community. The quality community is one which meets the needs and desires of its visitors and inhabitants. This could be evaluated in term of the community open spaces or in this context is the neighbourhood park. Quality according to Smith *et al.* refers to the distinguishing properties that promote a degree of excellence or high rank. The principle criteria among others include the concept of livability, character, connection, mobility, personal freedom and diversity.

(In Gobster, 1998), various external and internal factors were listed for the success of a community park in North Chicago, United States. Among the external factors are surrounding neighbourhood factors; social diversity of park users; the strong neighbourhood and community group; and a well established advisory council. For the internal factors, the physical design of the park plays an important role as well as management of the park and finally supervision of its users and park management are the key role in ensuring a park is successful in serving its diverse users. (CABE SPACE, 2005) work confirms the link between high quality green spaces with the increased housing prices; benefits in improving the image of an area as to attract investment; contribution to biodiversity; contribution in promoting physical activities and the benefits to health; and finally overcoming the anti-social behavior through design and management. Qualities of a successful green space by CABE SPACE will be adopted in this study as to determine the quality criteria for a neighbourhood park. Among the park qualities are sustainability, character and distinctiveness, definition and enclosure, connectivity and accessibility, legibility, adaptability and robustness, inclusiveness and biodiversity. Only one previous study specifically developed and validated quality audit instrument similar to what this review would like to achieve and this was in England by (Hillsdon, Panter, Foster, and Jones, 2006). Other measures reviewed in previous literature were concerning overall successful measures toward urban open spaces. Therefore, it was important to develop a new instrument to validate the relationship between selected variables in the hope to achieve what is regarded as quality in a neighbourhood park setting.

Defining 'Neighbourhood Park':

The important components of a neighbourhood according to (Hester, 1984) is a focal point such as school and recreational area where each house should be adjoined to a planned open space area although many sociology scholars often debated that a definition of the neighbourhood was irrelevant simply because the concept of neighbourhood was vast and had evolved through time. However, this review will correspondingly use the definition in terms of a neighbourhood space instead, where the concept according to Hester is a space limited to public and that it is an outdoor territory close to home.

According to (Willie, 1992), 'quality is about people and attitudes.' Quality is not solely about techniques and procedures but should include people who actually use them. Among definitions on quality given by Willie are 'fitness for use,' 'conformance to requirements,' continuous improvement,' 'delighting the customers,' and many more. Quality has been widely defined; examples include a famous definition from the field of Business Management and Services, that; 'Quality is the degree of excellence by which we satisfy the needs of the customer (Neil Johnson and cited in Willie, 1992).'

A neighbourhood park according to (Chapman, 1999) is a place where diverse needs are met without the necessity of travelling a long distance, providing basic recreational amenities for all users; it is also usually located within the center of a development. Similarly, (Von Kursell's, 1997) thesis defines Neighbourhood Parks as places which serves both active and passive recreation providing a local park function and facilities to a wide range of people. Usually, it contributes to an area of 0.5 to 0.8 kilometer radius or catchment area. Nevertheless, the term neighbourhood park in this study will refer to green open space which is, public, available for leisure and recreational purposes similar to those mentioned by (Sugiyama and Ward Thompson 2008) in their research examining the relationship between various aspect of neighbourhood open spaces with older adults' walking for transport and recreation. However, Neighbourhood Park in this context will only refer to parks that are situated within a community neighbourhood housing area and which offers leisure and recreational purposes for local and the immediate communities. For the purpose of this review, quality of neighbourhood park will be defined as 'Quality Neighbourhood Park' is, 'a successful and excellent public green open space within a residential neighbourhood area that conforms to the needs and requirements of the people including various techniques in using space and agreed upon standards that is beyond the usual outdoor recreation and leisure expectations'.

Successful Green Open Spaces Research:

In establishing the understanding of a quality neighbourhood park, a detailed review of successful green open spaces findings from past research in the field of urban forestry, urban greening, landscape architecture and park and recreation management was achieved. Here, findings from literature on factors for successful green open spaces can be further divided into several sub-categories which include the natural surrounding factors, spaces & design factors, cultural & social motivation factors and finally the external factors that contribute to the understanding of what is called successful green open spaces (Table 1).

Natural Surrounding Factors:

Among authors discussing factors of natural surroundings includes (Van Herzele's study, 2003) which implies that the amount and quality of green spaces will affect citizens' activity patterns, frequencies of every day recreation, opportunities to relax from daily stress as well as the way knowledge about the environment is acquired. Therefore, quality of green spaces could be assessed separately using space, nature, culture and history, assessments of quietness as well quality of facilities. Similarly, (Chiesura's, 2004) study suggested that the current sustainable indicator for urban development which is much related to most city planners and urban designers in their work should take into account the availability of public spaces and green open areas as they have been proven to fulfill the needs and expectations for the satisfaction in their living environment which should lead to a sustainable city.

The valuation of urban parks must start from the appraisal of the needs, wants and beliefs towards sustainable city strategies. (Correspondingly, Neuvonen, Sievanen, Tonnes, and Koskela, 2007) discussed the relationship between the amounts of green space in residential areas with the frequency of participation of close-to-home recreational visits. Their study among Helsinki's residents shows that close-to-home nature should be an indicator of the success for planning a new housing areas as well as developing old suburbs where the green environment should be valued as a remarkable source of health and well-being for the residents to help achieve more satisfying and happier lives.

Spaces and Design Factors:

Accordingly, (Smith *et al.*, 1997) study is important as they systematically organized the quality principle and criteria into a useful matrices framework which is useful for analyzing the effect of physical form on the quality of a community. The matrices guide the process for improving the quality of a community through physical forms and their relationship to the community quality principles. Their research shows that the

physical form criteria play an important role in achieving quality in a community. Similarly, (Gobster, 1998) implicated that instead of urban park being a boundary parks, it should function as a green magnet instead of green wall. It is therefore, important to understand from his study on what is associated to a success of a park. In Gobster's study, some external and internal factors for a successful park have been discussed. Among them are the well-known historical and cultural diversity that the park possesses; social diversity of the user; strong neighbourhood and community group that worked hand-in hand with city, state and federal agencies and finally a successful park should have a well-established advisory council which consist of local residents and park administrator.

Subsequently, a study in Norwich, England by (Hillsdon, *et al.*, 2006) looked into the association between access to quality urban green space and levels of physical activity. Hillsdon's study developed and reviewed new measures capturing aspects of green space, among others are accessibility, maintenance, recreational facilities, amenity provision, signage and lighting, landscape, usage and atmosphere. Their findings indicate that middle-aged men and women were not directly associated with amount of physical recreational activities done per week as well as their access to any large, quality, urban green spaces.

Cultural & Social Motivation and External Factors:

(Tyrvaainen, *et al.*, 2007) study developed simple method to describe the experienced qualities of green areas for strategic planning purposes pertaining to the provision of green area in Helsinki, Finland. It seems clear that according to their study, the most important features associated with favourite places can be listed as tranquility, the feeling of being in a forest and naturalness. Among the positive quality criteria indicated are 'beautiful landscape,' 'valuable nature site,' 'forest feeling,' 'space and freedom,' 'attractive park,' 'peace and tranquility,' 'opportunities for activities,' and 'history and culture.' Otherwise, the negative quality criteria listed would be 'unpleasantness,' 'scariness' and 'noisiness.'

Besides, it is expected that (Eng and Niininen, 2005) findings on satisfaction towards service quality in public parks could also be generalized to a Neighbourhood Park setting in Malaysia. Eng and Niininen had made several important implications that should allow park managers and related managing departments to achieve high satisfaction among park users, this include ideas on how services and facilities could be improved.

Needs for outdoor recreation in a Neighbourhood Park:

A lot of people share common needs among each other, but each person also has unique needs and ways in expressing and satisfying those needs. By listing all the reasons why people go to an outdoor area as well as what would make one go there more often will answer the question why people use the space in the first place. Later, if these answers were combined with the answers of others, a pattern of personal preferences can be derived. Such pattern represents the requirements of what residents expect of a neighbourhood space that satisfies them (Hester, 1984). A checklist of user needs according to Hester, which relates to the design of a neighbourhood space includes, settings, safety, aesthetic appeal, convenience, and psychological comfort, and symbolic ownership, policy in use, cost and interaction with natural environment.

(Smith *et al.*, 1997) matrix analysis shows that connection and character scored the highest in association with the physical form and the physical form criteria included a walkable community, outdoor amenities, lots of seating, barrier free, and open space in residential areas. Their study systematically organized the quality principle and the form criteria into useful matrices framework which are useful for analyzing the effect of physical form on the quality of a community. Their research shows that the physical form criteria play an important role in achieving quality in a community.

(Matsuoka and Kaplan, 2008) on the other hand, has researched and reviewed various available empirical studies pertaining to urban landscape and open spaces which has led to confirm the importance of the nearby natural environment to human well-being. Their research also led to the establishment of remarkable theoretical principles of human needs in the urban landscape that exist worldwide. The six human needs identified are contact with nature and each other, aesthetic preference or attractive environments, places for recreation and play, privacy, citizen participation whereby giving a more active role in the design of their community and finally, the sense of community identity. Among others, several past research have also found that residents of higher socio-economic status have greater value towards urban nature areas than those of lower means.

Use pattern in Neighbourhood Park:

Generally, public open spaces near homes are used for leisure activities, work, gatherings, educational projects and much more (Hester, 1984). Earliest studies too have indicated that there are several important observable factors that influence the use in a neighbourhood space. Among the factors include the qualities and quantity of the space; the social makeup of the potential users (which means different socioeconomic class), life-cycle stage, sex, ethnicity and region; psychological factors influencing personal preference as well as the accessibility of local against non-local spaces, facilities and services. Relevant past research relating to use pattern study in the context of residential green open spaces and parks will be divided to four specific sub-topics

which includes active recreation, passive recreation, spaces utilized and user focus. All of these items were gathered from literature mentioning use pattern among people who visited the mentioned open spaces.

Active Recreation:

(Zhang and Gobster, 1998) research indicates that current preferred use for outdoor activities was relaxing, swimming, basketball, tennis and bicycling. Here relaxing includes walking, people-watching, sitting and chatting. Similarly, (Lindsey, 1999) study provided information about use and perceptions of urban greenways. The report has established four broad themes for management of the greenways which includes recreation; conservation; linkage and education. Walking, running/jogging, bicycling and skating was the most common activity where users were found to use the trail at least more than three times per week. The study found that health and fitness was the reason for using greenway trails partly because of the quality of maintenance and trail features indicating the needs for more drinking fountains. The main problem perceived was cleanliness and conflict of use. Finally, (Arnberger, 2006) studied long-term recreation use pattern on activity types in urban forest using video monitoring on a daily basis. The study indicated that recreation use is more concentrated between late morning and late afternoon especially during weekends with the presence of bicyclists, joggers, walkers and dog walkers. With this data, forest management can tailor direct or indirect measures to address specific user groups to reduce user conflicts or crowding perceptions.

Table 1: Studies exploring outcome of quality/successful residential green open space, 1984 - 2010

Year & Source	Country	Site categorization	Research Type	Sample size (n)	Main Findings
Kaplan, R.(1984)	USA	Urban Nature	Theory	-	Natural setting (fascination); various shape and trunk colour trees; Involvement with nature; SF: 'Sense of being' (coherence); active participation; DC: Setting; recreational activities;
Bradley & Millward (1986)	UK	Parks/Green Open Space	Empirical	406	NF: Informal natural or countryside like landscape SF: Use & number of visitors; Social mix of users; value by local people Diversity of activities; upgrade standard of basic facilities such as paths, seats & soft planting;
Burgess <i>et al.</i> (1988)	UK	Local Public Parks/ Neighbourhood Parks	Theory & Empirical	555	Natural environment; changing seasons; feeling the sun, wind & rain; wild patches of land & woods; SF: Recreational needs for children & multi-racial society; outing activities; Accessibility & connection; varied topography and plants; 'non-materialistic' MS: Safety; good maintenance
Smith <i>et al.</i> (1997)	Canada	Urban Community	Theory	-	SF: Walkable community; Outdoor amenities; lots of seating; Accessibility & Connection; Character & Distinctiveness MS: Barrier-free
Gobster (1998)	USA	Public park/ neighbourhood boundary parks	Empirical	1290	DC: Good overall & physical design SF: Social diversity of users; strong community groups' supervisions of users MS: Well-established advisory council; surrounding neighbourhood; park management
CABE Space (2003)	UK	Parks & Public Space	Theory	-	NF: Environment & mental health; tree & grass; natural areas; air quality; shade; wildlife SF: Specific needs (children); community gardens; Social inclusions; Social events; DC: Challenging play space; increase lighting; less traffic for cyclers; assessibility MS: Secure spaces;
CABE Space (2005)	UK	Green Spaces	Theory	-	Character & distinctiveness; Connectivity & accessibility; Legibility; Adaptability & Robustness; Inclusiveness; Biodiversity MS: Sustainability; enclosure
Year & Source	Countr y	Site categorizati on	Researc h Type	Sampl e size (n)	Main Findings

Eng & Niininen (2005)	UK	Public parks	Empirical	1745	NF: Preserve natural environment SF: Recreational activities for children Accessibility & connection; Facilities; Track for joggers; better lighting; creative space MS: Service quality; safety; good maintenance
Hillsdon <i>et al.</i> (2006)	UK	Urban green space	Empirical	4732	NF: Atmosphere SF: Usage DC: Accessibility & connection; Recreational facilities; Signage & lighting; landscape MS: Good maintenance & services; Amenity provision
Sanesi & Chiarello (2006)	Italy	Urban green space	Empirical	351	Increase the amount of green space; Usage: Space for socializing and leisure; Younger user; accompany by friends, family & pets; relax; air quality; Demand improvement on quantity & quality of green spaces; more facilities; children's play equipment; sports facilities; cycle tracks; dog walking areas; Improvement of management; Funding; Safety & security;
Lange <i>et al.</i> (2008)	Switzerland	Green space	Empirical/ 3D visualization	358	Planting fruit trees or hedgerows; Agriculture scenario; farmland; meadows with orchards; DC: Visual – aesthetics; structured landscape with vegetation elements; MS: Nature conservation; landscape preferences;
Sugiyama <i>et al.</i> (2009)	UK	Neigh. Open Space	Empirical	1,818	NF: Pleasantness and safety SF: Social interaction; sense of community DC: Quality of path and facilities; actual use
Doick <i>et al.</i> (2009)	UK	Urban green space	Case Study	6 sites	NF: Wildlife; more trees & wildflowers; SF: Should promote social diversity & local use; DC: Spaces for diverse activity; should design for walking, relaxing & exercise; Signage & Information boards; quality in design; aesthetics; MS: Biodiversity; site delivery; on-going management; maintenance; safety;
Year & Source	Country	Site categorization	Research Type	Sample size (n)	Main Findings
Chen <i>et al.</i> (2009)	China	Urban green space	Empirical	280	NF: Scenic beauty; peace with nature; plants identity; auditory factors; scent/smell; touching sensory; SF: Opportunity of social contact; cultural features; DC: Proximity to residence; visual quality;
Jim & Chen (2010)	Hong Kong	Neighbourhood Parks	Empirical/Case study	18 private Apartments	NF: Natural element (vegetation); aesthetic quality of plants; environmental functions; SF: community pride; humanized; familiar; social interaction; DC: NP raised apartment price; urban aesthetics; conveniently located; easily accessible; MS: Neat & managed; Safe; Economic value;

Indication of abbreviations used: NF = Natural Factors; SF = Social Factors; DC = Design Considerations; MS = Maintenance and Services.

Passive Recreation:

For passive recreation, (Oguz, 2000) study suggested that service quality in park planning and management is more important than service variety. High service quality level mentioned in his study regarded as a well-maintained and a structured natural landscape. Hence, this study implies that the use of each park has its own characteristics where the main factor for recreation was its natural landscape of each specific park. Similarly, attractive features of parks were listed as having pleasant landscape and visual elements, nearness to water and peaceful atmosphere, whereas non-preferable features was rated on poor service quality of the facilities in the park such as restaurant, cafes and toilets. Insufficient facilities were rated towards disable facilities as well as activities and programming offered by the park management.

(Likewise, Gomez and Malega, 2007) research indicated that the objective measures of distance to the resource do not significantly impact park use or perceived park use benefits by an ethnic group. They found that

distance is not a factor in visiting a park and did not play as critical role especially in suburban areas (using a case study of the Westville Dam Recreation Area, Southbridge, Massachusetts). Their research also supports the continued use of the ethnicity, marginality, discrimination, and acculturation paradigms as in combination. (Notwithstanding, Hegetschweiler, *et al.*, 2007) study in Switzerland contends that surroundings and location for picnic sites were favoured to be by a stream where children could play, drinks could be cooled, is slightly away from the road and fire rings facilities that is without concrete. Most picnickers preferred open forest structure or managed forest where the dense area could be appreciated for its scenic beauty whereas moderately open settings are preferred for recreation purposes. Correspondingly, (Kaczynski, *et al.*, 2008) findings accord that parks that have more features were more likely to be used for physical activity indicating that park facilities such as paved trails and wooded area had the strongest relationship with park use. The authors also contended that size and distance to the park itself were not significant. Among most common facilities used in the park were path, playground, wooded area, unpaved trail, meadow, paved trail, water area and others.

Spaces Utilized:

Spaces utilized factor here explains about use pattern and places or spaces where it often happen which includes a study by (Gobster, 1995), which shows that location of greenway trails are the important factor in perception of use among visitors. According to Gobster, small loop trails that pass through parks and neighbourhood will be more useful and cost effective on a daily basis needs. Design consideration of the trails too is important to ensure the quality of trails is available to meet user needs and preferences. Similarly, (Syme, *et al.*, 2001) examined the reported usage among homeowners in Perth, Australia towards home gardens, neighbourhood parks and local wetlands. Their findings posits that smaller lot size area, such as the local wetlands has more apparent effect on reported usage compared to neighbourhood parks or local parks. They mentioned that people who have higher perceptions towards ownership, activities, accessibility, participation, security and comfort tend to be more likely to visit wetlands rather than neighbourhood parks. It is therefore attested that the creation of naturally vegetated water bodies can add benefit and increase demand to those living in smaller blocks household environment. Additionally, (Jim and Chen, 2006) study suggest that residents of China, specifically Guangzhou prefer large green sites with wide range of recreational facilities, high-quality sites with better design and management and green coverage and mature trees. An important purpose for visiting green spaces is for nature appreciation. Accessibility too has high influence on green space selection which request for improvements due to expansion of the mass transit railway network.

User Focus:

Study on user focus was mentioned by (Wrigley and Gould, 2002) study, in which the authors acknowledged several strategies for improving park conditions through analysis of strength and weaknesses. Among others are strategies to increase usage through creating more appropriate facilities like children's playgrounds, enhancing safety within space which are close proximity to surrounding water and bushes, providing diversification to sites such as the inclusion of gas or electric barbeque facilities near picnic tables, provision of toilets and picnic tables closer to parking zones, providing direct disabled access, outdoor 'class-based' activities for school groups or for other special occasion activities such as small weddings in the park, reduction in display plant material (to lower operational costs), signage enhancement, designating walks or jogging trails which could also supply educational information about specific plants etc and finally, implementing guided walks policy 'Friends of the Parks' groups.

Natural Surrounding Factors:

There is a substantial body of literature demonstrating preferences study towards outdoor recreation. For the purpose of this paper, only preferences towards outdoor in the context of residential open spaces or neighbourhood park will be reviewed. This category will be further divided into four sub-categories which encompass items relating to the natural surrounding factors, cultural and social motivation factors, spaces and design factors and external factors. Several authors have discussed matters relating to the preferred natural surroundings, among others is (Kaplan, Kaplan and Wendt, 1972), where their research indicated that the nature scenes were preferred over urban scenes. In the other hand, (Korpela, 2003) study investigated the association between negative mood and negative feelings and place preferences. Among favorite places identified in this study were natural places, residential places, built recreation areas, leisure time and sport settings, retail settings, transportation settings and community service settings. Korpela postulates that adults with 'high negative mood' were more likely to choose natural places than other places as their favorite place.

Similarly, (Muderrisoglu and Demir, 2004) study of Istanbul, posits that there is a strong relationship between visual features and perceived security and beauty. High or positive scenic quality in the other hand was perceived to be on the visible amounts of woody vegetation, amount of grass as well as physical feature of water. These are all dependant on the path's width, population density as well as maintenance problems. In the same manner, parks that were rated to be the safest usually have visible long view distances, and a large amount

of grass and water. However, naturalistic dense vegetation has little effect on the increase of perception of safety.

(Bjerke, *et al.*, 2006) posits that scenes that have moderate degree of vegetation receive higher preference score compared to open scenes. Consequently, their research asked people to rate landscape according to appropriateness for recreation where this existence of preference for relatively dense vegetation in urban parks will affect the designing of urban parks in Norway as a whole. People in general find that scenes that contain lowest degree of vegetation density and highest degree of openness and accessibility are beneficial for recreation purposes. They also found that higher levels of education among users will lead to positive association with wildlife motivation.

Correspondingly, (Lee, Ellis, Kweon and Hong, 2008) study, suggested that residents are more likely to be satisfied with their neighbourhood environment when these environments contain large connected tree patches with a high degree of complexity in shape and variability in size. The connectivity between patches should also be high in achieving sustainable landscapes. Thus in their research, the terms 'naturalness' or 'nature-like' were used to describe the dominance of vegetations in landscape settings, rather than landscape structure. Indeed, (Caula, *et al.*, 2009) study which took place in France, analyzed people's willingness to contribute financially to urban green spaces and how people's attitudinal and socio-economic characteristics affect such willingness. They explore people's preferences toward natural urban green spaces to determine how those preferences are influenced. It seems clear that most people want more green spaces in their city and that they preferred the natural over ornamental types of green spaces. Their result confirms the interest of people for maintaining urban ecosystem services, particularly through the existence of natural green spaces in city.

Discussion:

In summary, to achieve a quality of a neighbourhood park, several important measures could be address as been discussed on the findings above. Hence, this paper have looked into how services and facilities could be improved, the overall and best variables to be considered for a quality neighbourhood park in an urban context by combining the design attribute as well as understanding the overall neighbourhood satisfaction level, looking into gender, socio-economic status and the cultural background aspect in a neighbourhood park setting.

Although quality in recreation and tourism field often managed to subscribe to many management and marketing researches, quality in the Landscape Architecture and recreation field remains limited. Therefore, research on quality green open spaces as a whole cannot ignore the users' needs aspect. As a result, the operational definition and the construct of 'quality of Neighbourhood Park' developed in this study can be a valid and reliable measure to quantify the successful and quality of open spaces as a whole in future research. Due to its both theoretical and practical significance, the 'Quality Neighbourhood Parks Criteria' is a tool to help achieve a deeper and more comprehensive understanding on quality towards green open spaces as to increase quality of life among users'.

The role of park too is very important in increasing the quality of life of people especially in urban area. Hence, this paper will also specifically looked into the objective environmental attributes such as the natural recreation resources, environmental quality and man-made recreation attributes as well as the main concepts of livability, environmental quality, quality of life and sustainability, and presents examples of underlying conceptual models as a framework. Other than that, meeting basic human needs towards urban open spaces in the urban landscape environment is important in order to achieve a quality of life and towards developing quality of Neighbourhood Park. This paper has focused on answering to the needs of park users towards a sustainable city development, similarities or differences among park user preferences, green open spaces in residential neighbourhood as the type of site to be used or as the controlled environment to be tested on the nature and human needs towards a neighbourhood park environment and finally to identify ethnicity utilization, activities and frequency of use to further indicate the relationship between perceived benefit and park use in the neighbourhood parks setting.

Hence, there are several benefits that can be learned from this research. It should be of interest to landscape architects, park designers, urban designers, city planners, architects, developers as well as any other professional involved in the development of new residential neighbourhoods. It is a tool to help designers promote qualities and to hinder dissatisfaction about residential green open spaces and thereby help to enhance community development socially, mentally, physically and spiritually. Different forms of open spaces require a range of appropriate benchmark standards (Doick, Sellers, Castan-Broto and Silverthorne, 2009). It will help designers and developers to evaluate their residential and community design options and to generalized to optimized quality towards their outdoor settings.

This study will also give impact to the current body of literature as it will test the selected variables from current findings developed by various Western scholars within the field of Landscape Architecture and Park and Recreation Management, and it will be developed as a single structure modeling to be tested against the Malaysian context or environment. The Quality Neighbourhood Parks Criteria will be a guideline or criteria suitable for any park designer or Landscape Architect in their work in developing a quality neighbourhood park.

Implications for future research:

The quality criteria developed through this review should be universally adapted, because it provides a very relevant framework for research in the area of landscape architecture, park and recreation management, urban forestry, and urban planning. At every level of the Malaysian government, recreation and park facilities have captured increasing interest and involvement from all parties and agencies concerned. However, the contribution has not been documented properly (Abdul Malek and Mariapan, 2009). The following research directions could be taken into considerations:

- Further research could also be implied to develop other criteria using these new definitions.
- Developing checklist applicable for decision making and planning process for new housing developments involving the allocation of green open spaces or Neighbourhood Park.
- Research that deals with inter-cultural preferences and differences of recreational needs in developing countries.
- Systematic research on needs and use pattern from third world countries perceptions.
- Determining factors that influence gender and race to participate in any outdoor and recreational activities in developing countries.

Conclusion:

This review has managed to revealed important independent and dependent variables which consist of various concepts and construct which can be used to develop quality neighbourhood parks criteria.

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REFERENCES

- Abdul Malek, N. and M. Mariapan, 2009. Visitors Perception on Vandalism and Safety Issues in a Malaysian Urban Park. *Theoretical and Empirical Researches in Urban Management*, 4(13): 93-107.
- Arnberger, A., 2006. Recreation use of urban forest: An inter-area comparison. *Urban Forestry and Urban Greening*, 4: 135-144.
- Baker, D., and J. Crompton, 2000. Quality, Satisfaction and Behavioral Intentions. *Annals of Tourism Research*, 27(3): 785-804.
- Bell, S., V. Hamilton, A. Montarzino, H. Rothnie, P. Travlou and S. Alves, 2008. Greenspace Scotland Research Report. Greenspace and quality of life: a critical literature review [Electronic Version]. *Greenspace Scotland; Transforming urban spaces; OPENspace; Sniffer*.
- Bjerke, T., T., Østdahl, C. Thrane and E. Strumse, 2006. Vegetation density of urban parks and perceived appropriateness for recreation. *Urban Forestry & Urban Greening*, 5 (1): 35-44.
- Burgess, J., Harrison, C.M., and M. Limb, 1988. People, Parks and the Urban Green: A Study of Popular Meanings and Values for Open Spaces in the City. *Urban Studies*, 25: 455-473.
- Brown, T.J., R. Kaplan, and G. Quaderer, 2009. Preferred natural environments and people with disabilities. *Therapeutic Recreation Journal*, 33(3): 209-221.
- CABE SPACE., 2005. *Start with the park: Creating sustainable urban green spaces in areas of housing growth and renewal*. Edinburg, United Kingdom: Commission for Architecture and the Built Environment
- Caula, S., G.T. Hvenegaard and P. Marty, 2009. The influence of bird information, attitudes, and demographics on public preferences toward urban green spaces: The case of Montpellier, France. *Urban Forestry & Urban Greening*, 8: 117-128.
- Chapman, G.A., 1999. *Design Variables and The Success of Outdoor Neighbourhood Recreational Facilities*. Unpublished Master Thesis, The University of Arizona, Arizona.
- Chiesura, A., 2004. The role of urban parks for the sustainable city. *Landscape and Urban Planning*, 68: 129-138.
- Christiansen, G., N. Conner, M. McCrudden and SUPER group, 2001. *The value of public open space for community service provision*, Sydney Urban Parks Education and Research (SUPER) Group, Sydney.
- Crow, T., T. Brown and R.D. Young, 2006. The Riverside and Berwyn experience: Constrasts in landscape structure, perceptions of the urban landscape, and their effects on people. *Landscape and Urban Planning*, 75.
- Crowford, D., A. Timperio, B. Giles-Corti, K. Ball, C. Hume, R. Roberts, et al. 2008. Do features of public open spaces vary according to neighbourhood socio-economic status? *Health & Place*, 14: 889-893.

- Doick, K.J., G. Sellers, V. Castan-Broto and T. Silverthorne, 2009. Understanding success in the context of brownfield greening projects: the requirement for outcome evaluation in urban greenspace success assessment. *Urban Forestry & Urban Greening* (doi:10.1016/j.ufug.2009.05.002).
- Dunnet, N., C. Swanwick and H. Woolley, 2002. *Improving Urban Parks, Play Areas and Green Spaces*. Bressenden Place, London: Department of Landscape, University of Sheffield, Department for Transport, Local Government and the Regions (DTLR).
- Eng, T.Y., and O. Niininen, 2005. An integrative approach to diagnosing service quality of public park. *Journal of Services Marketing*, 19(2): 70- 80.
- Gobster, P.H., 1995. Perception and use of a metropolitan greenway system for recreation. *Landscape and Urban Planning*, 33 : 401-413.
- Gobster, P.H., 1998. Urban parks as green walls or green magnets? Interracial relations in neighbourhood boundary parks. *Landscape and Urban Planning*, 41: 43-55.
- Gomez, E., and R. Malega, 2007. Residential Attributes, Park Use, and Perceived Benefits: An Exploration of Individual and Neighbourhood Characteristics. *Leisure/Loisir: Journal of the Canadian Association for Leisure Studies*, 31(1): 77-104.
- Hegetschweiler, K.T., H.P. Rusterholz, and B. Baur, 2007. Fire place preferences of forest visitors in northwestern Switzerland: Implications for the management of picnic sites. *Urban Forestry and Urban Greening*, 6: 73-81.
- Hester, R.T., 1984. *Planning Neighbourhood Space with People*, (Second ed.), New York: Van Nostrand Reinhold Company.
- Hillsdon, M., J. Panter, C. Foster and A. Jones, 2006. The relationship between access and quality of urban green space with population physical activity. *Public Health: Journal of The Royal Institute of Public Health*, 120: 1127-1132.
- Jim, C.Y., and W.Y. Chen, 2006. Recreation-amenity use and contingent valuation of urban greenspaces in Guangzhou, China. *Landscape and Urban Planning*, 75(1-2): 81-96.
- Kaczynski, A.T., L.R. Potwarka and B.E. Saelens, 2008. Association of Park Size, Distance, and Features with Physical Activity in Neighbourhood Parks. *American Journal of Public Health*, 98(8): 1451-1456.
- Kaplan, S., R. Kaplan and J.S. Wendt, 1972. Rated preference and complexity for natural and urban visual and urban visual material. *Perception Psychophys*, 12(4): 354-356.
- Kaplan, R., and J.F. Talbot, 1988. Ethnicity and Preference for Natural Settings: A Review and Recent Findings. *Landscape and Urban Planning*, 15: 107-117.
- Korpela, K.M., 2003. Negative mood and adult place preference. *Environment and Behaviour*, 35(3): 331-346.
- Kyle, G.T., A.J. Mowen and M. Tarrant, 2004. Linking place preferences with place meaning: An examination of the relationship between place motivation and place attachment. *Journal of Environmental Psychology*, 24 (4): 439-454.
- Lee, S.W., C.D. Ellis, B.S. Kweon and S.K. Hong, 2008. Relationship between landscape structure and neighborhood satisfaction in urbanized areas. *Landscape and Urban Planning*, 85(1): 60-70.
- Lindsey, G., 1999. Use of urban greenways: insights from Indianapolis. *Landscape and Urban Planning*, 45: 145-157.
- Lo, S.M., C.Y. Yiu and L. Alan, 2003. An Analysis of attributes affecting urban open space design and their environmental implications. *Management of Environmental Quality: An International Journal*, 14(5): 604 - 614.
- MacKay, K.J., and J.L. Crompton, 1990. Measuring the Quality of Recreation Services. *Journal of Park and Recreation Administration*, 8(3): 47-56.
- Manning, R.E. and W.A. Freimund, 2004. Use of Visual Research Methods to Measure Standards of Quality for Parks and Outdoor Recreation. *Journal of Leisure Research*, 36(4): 557-579.
- Matsuoka, R.H., and R. Kaplan, 2008. People needs in the urban landscape: Analysis of *Landscape and Urban Planning* contributions. *Landscape and Urban Planning*, 84: 7-19
- McRobie, L., 2000. 'A new set of priorities: English Heritage' In *The Regeneration of Public Parks*, (Eds, Woudstra, J. and Fieldhouse, K.), The Garden History Society & Landscape Design Trust, E & FN Spon & English Heritage, London, pp: 3.
- Muderrisoglu, H., and Z. Demir, 2004. The Relationship Between Perceived Beauty and Safety in Urban Recreation Parks. *Journal of Applied Sciences*, 4(1): 72-77.
- Neuvonen, M., T. Sievanen, S. Tonnes and T. Koskela, 2007. Access to green areas and the frequency of visits - A case study in Helsinki. *Urban Forestry & Urban Greening*, 6: 235-247.
- Oguz, D., 2000. User surveys of Ankara's urban parks. *Landscape and Urban Planning*, 52(2-3): 165-171.
- Özgüner, H., and A.D. Kendle, 2006. Public attitudes towards naturalistic versus designed landscapes in the city of Sheffield (UK). *Landscape and Urban Planning*, 74(2): 139-157.

- Parasuraman, A., V.A. Zeithaml and L.L. Berry, 1985. A Conceptual Model of Service Quality and its Implications for Future Research. *Journal of Marketing*, 49(4): 41-50.
- Payne, L.L., A.J. Mowen, E. Orsega-Smith, 2002. An Examination of Park Preferences and Behaviors Among Urban Residents: The Role of Residential Location, Race, and Age. *Leisure Sciences*, 24(2): 181-198.
- Smith, T., M. Nelischer, and N. Perkins, 1997. Quality of an urban community: a framework for understanding the relationship between quality and physical form. *Landscape and Urban Planning*, (39): 229-241.
- Sugiyama, T., and C. Ward Thompson, 2008. Associations between characteristics of neighbourhood open space and older people's walking. *Urban Forestry & Urban Greening*, 7(1): 41-51.
- Syme, G.J., D.M. Fenton, S. Coakes, 2001. Lot size, garden satisfaction and local park and wetland visitation. *Landscape and Urban Planning* 56: 161-170.
- Tucker, P., J. Gilliland and J.D. Irwin, 2007. Splashpads, Swings, and Shade: Parents' Preferences for Neighbourhood Parks. *Canadian Journal of Public Health*, 98(3): 198-202.
- Tyrväinen, L., K. Mäkinen and J. Schipperijn, 2007. Tools for mapping social values of urban woodlands and other green areas. *Landscape and Urban Planning*, 79(1): 5-19.
- Van Herzele, A., and T. Wiedemann, 2003. A monitoring tool for the provision of accessible and attractive urban green spaces. *Landscape and Urban Planning*, 63: 109-126.
- Veal, A.J. and R. Lynch, 2001. *Australian Leisure*, Longman, Frenchs Forest N.S.W.
- Vogt, C.A. and R.W. Marans, 2004. Natural resources and open space in the residential decision process: a study of recent movers to fringe counties in southeast Michigan. *Landscape and Urban Planning*, 69(2-3): 255-269.
- Von Kursell, A.A., 1997. *Replanning Urban Parks*. Unpublished Masters of Urban and Rural Planning Thesis, Technical University of Nova Scotia, Halifax, Nova Scotia, Canada.
- Ward Thompson, C., 2002. Urban open space in the 21st century. *Landscape and Urban Planning*, 60: 59-72.
- Williams, K. and S. Green, 2001. *Literature Review of Public Space and Local Environments for the Cross Cutting Review*: Oxford Centre for Sustainable Development, Oxford Brookes University.
- Willie, E., 1992. *Quality: Achieving Excellence*. London, UK: Century Business.
- Wrigley, M. and B. Gould, 2002. Considering people, adding value, maintaining relevance: Strategies and tactics to increase the usage of public parks. *Journal of Leisure Property*, 2(2): 142-154.
- Zhang, T. and Gobster, P.H. 1998. Leisure preferences and open space needs in an urban chinese American community. *Journal of Architectural and Planning Research*, 15(4): 338-355.