

IMPACT OF URBAN PARKS ON WELL-BEING OF NEIGHBOURHOOD RESIDENTS

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Abstract

Landscape architecture is a field which can enrich the well-being of the human that enhance the quality of life. Although the definite relationship is yet to be discovered, the studies of well-being incorporates the concepts of satisfaction with life and the positive effects discussed under health, psychology, sociology etc. Objective of this qualitative investigation is to enquire the impact of urban parks on well-being of the neighbourhood residents under three variable factors such as Physical, Mental, and Social. This study measures the perceptions and preferences of population through their daily schedules, experiences and satisfaction assessed by user's preference on thirteen identified variables influenced from three well-being factors (Physical, Social, and Mental). 20 participants from each park (total 60) were interviewed with a Questionnaire developed to assess the well-being of the neighbourhood of three urban parks (Wetland Park Nugegoda, Weras Ganga Park Bellanvilla and Crow island Beach Park in Mattakkuliya) in Colombo. The findings revealed that the Physical and mental well-being has been positively affected while the social wellbeing shows a minor impact by the selected urban parks in Sri Lanka. Another observation of the study is that the impact on social wellbeing is comparatively low in every park while the Crow island Beach Park showed relatively higher social wellbeing index compared to the others. Whether is it due the design of the park or the more socially inclined lower income category who frequent this park more regularly could not be concluded from this survey, but further research could attend this matter. From the study it is evident that Physical, mental supportiveness is positively provided by the urban parks, but however supportiveness for the social well-being is not delivered to that extent to the nearby residents.

Keywords: Landscape well-being, urban parks, neighbourhood residents, Supportiveness

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Introduction

Well-being of the human is most important thing for their day today life which supports to enhance the quality of life. Although the definite relationship is yet to be discovered, the studies of well-being almost always incorporates the concepts of satisfaction with life and the positive affect. The term well-being is discussed under many fields of study as health, psychology, sociology and many more. Therefore, people need to be strong in mentally, physically, socially and financially to satisfy their lives. But today's global trends have obstructed people's aforementioned satisfaction in different ways. Urbanization is one of global trend which is very common in most of the countries and percentage of total population living in urban context is continuously increasing. This causes the people living in a congested areas and human seek to find open spaces in and around their residence areas. Those are essential for the urban atmospheres and impact to the city and its people reducing the heat island effect, the surface runoff and supporting the people's physical, social and mental life(Andrews, 2014).

In Sri Lanka, the development of the concept of urban park is carried out by the local authorities. Accordingly, number of urban Parks were developed in order to achieve collective well-being of the surrounding communities. This research was conducted to fill the gap of how people satisfy their day to day life with the supportiveness of the nearby urban parks. As well focused on how urban parks support the well-being of the nearby residents. Lack of the previous studies focuses on how urban parks supports the well-being of the users. Therefore, the main aim of this paper is to find out the physical, social and mental supportiveness for the nearby residents provide by the urban parks.

The first part of the article, describe about the relationships and impacts of the urban parks and well-being of the people and thesecond part describes the methodology, on which the paper is based on. The impacts of the urban parks are analysed from three case studies in urban context. Finally, the outcomes are discussed in terms of supportiveness of the urban park for the well-being of the residents.

Landscape and well-being- Impact of urban parks for the well-being of the user

Urban Park is a public space that embedded in city or town area that can be open or closed with natural vegetation and there is no any standard or widely accepted definition of urban park. As Springgate (2008) explained, "as a practical matter, there is no standard, widely accepted definition of a park." (Day & Kelly, 2013) However what is not disputed is that these urban parks support the well-being of the user.

The term well-being is discussed under many fields of study as health, psychology, sociology and many more. Still there is no any fixed definition on the well-being mentioned in Literature, the meaning differs with the situation. The oxford dictionary defines well-being as "the state of being comfortable, healthy or happy" ("Definition of well-being in English by Oxford Dictionaries"), while the Cambridge dictionary defines as "the state of feeling healthy and happy." ("well-being Meaning in the Cambridge English Dictionary,"). The well-being can be simply defined as the happiness or the satisfaction with the life or the day to day activities and urban parks has the potentials to support the people to live a happy satisfied life. Two types of well-being factors are identified in (Kahneman, Diener, & Schwarz, 1999). Those are *subjective well-being* and *objective well-being*. Subjective well-being is been almost always incorporated the concepts of satisfaction with life and the positive affect from the perception and experience of an individual. Objective well-being is based on the hard or tangible data other than the

collective data from the satisfaction of the human. objective data is based on more official statistical data (Ivković, Ham, & Mijoč, 2014). This study focuses only on subjective well-being of the user.

Modern urban development has impacted the human, natural environment and habitats with most of the urban areas are filled with manmade structures. Never in history human has so little time with the natural environment and the consequences for humans' well-being are less understood (Katcher & Beck, 1987). Number of theories has explained how Natural landscape influence on human well-being (Andrews, 2014).

Natural environment in urban matrix frequently benefits the physical and mental well-being of the human (Kaplan & Kaplan, 1989; Ulrich, 1984) while open spaces provide relief from urban heat island and air pollution (Whitford, Ennos, & Handley, 2001) the greenery support the human well-being by providing better atmosphere within the city. As Ambrey, C. Fleming, C (2014) claims, Increasing the natural green space in a city will provide positive effect and self-satisfaction in neighbourhood and Kim and Kaplan (2004) also claims that open space plays an important role to create interaction between community and surrounding residents (Andrews, 2014). Green spaces help the user to communicate with the natural environment and reduces the stress level, feel relax, calm and to enhance the physical well-being of the user.

Bolund and Sven (1999) claims that people who are exposed to natural environment has less stress than people who exposed to build environment (Sadeghian & Vardanyan, 2013). Some studies have concluded that the communication or the interaction with the natural setting will improved the emotional gain, psychological satisfaction (Hartig, Mang, & Evans, 1991) and lowered blood pressure resulting better health conditions (Hartig et al., 2003).

The above literature discusses about natural setting in urban areas and it is positive impact on human well-being. However not every natural setting in urban environment provide positive satisfaction and some abandon open spaces will direct to crime (Kuo, Sullivan, Coley, & Brunson, 1998). Therefore, it is important to carefully locate and design urban natural environments to obtain their maximum benefits to the city dwellers.

Landscape architectural approaches could be employed to develop or preserve such urban open spaces and carefully done may result in effective urban parks fulfilling the economical, ecological and social needs of the human. Such designed spaces will create the abandon green spaces into more valuable, human accessible spaces.

Such Landscape developments will support the social interaction in the surrounding community by social interactive spaces which have been created in the park (Herzele & Wiedemann, 2003; Kuo et al., 1998; Maas et al., 2009). These urban parks can lead to community and the social well-being of the surrounding neighbourhood. Communicating and built up relationships in urban park can support user's social well-being and the mental well-being. Finally, the urban parks impact the social, physical and mental needs of the users and provide more direct and indirect benefits for the surrounding community.

Gallup Sharecare Well-being Index

Gallup Sharecare Well-being Index is used to measure comprehensive, real time information on the well-being of the populations of the United States of America. This index measures the perceptions and the preferences of the population through their daily schedules and the

experiences. This Index further incorporates intuitions towards the attitudes, behaviours and other psychophysical attributes in a nationwide, state-wide and at smaller community levels. Gallup have accommodated five essential elements in the Survey. The initial research results were based on the simple question, “What is the best possible future an individual will predict for themselves?”. Afterwards, the information on education, health, income, relationships, professions and many other data from all across the world was compared and analysed with how the people experienced their day-to-day lives and how they self-evaluated them. With the comprehensive evaluation, the final essential elements have been listed as physical well-being, community well-being, Financial well-being, social well-being and purpose well-being.

- Physical Well-being - Having a good health and enough energy to do the day to day works.
- Social Well-being – Strong relationships and the love, affection in the life
- Community Well-Being – Sense of engagement and the connection with the area an individual will live
- Financial Well-being – Effective management of the economic life
- Purpose well-Being – Liking the day to day works involved and be motivated

Heuristic framework on Landscape and Well-being

Apart from the Gallup Sharecare Well-being Index, a Heuristic framework of study has also been applied in order to construct a more reliable framework for this research. This Heuristic study is selected from the other different studies since this describes the relationship between the Landscape and the Well-being.

This framework is extracted from the works of Andrea, Kathrin and Thomas from the research titled, “*Landscape and Well-being: a scoping study on the health-promoting impact of outdoor environments*”.

The word ‘*Heuristic*’ means enabling a person to discover or learn something for themselves. So, this study is a result of a self-learning and exploration of the authors from the data collected.

This study has been conducted to evaluate the Landscape as a health-promoting space. The methodology of the study has been included only the studies from the industrialized countries and excluded all the studies considering the environmental pollution which are different from the conception of landscape used in this study.

<i>Gallup Sharecare Well-being Index</i>	<i>Heuristic framework on Landscape and Well-being</i>	<i>Framework compiled by the Author</i>
Physical	Physical	Physical
Social	Social	Social
Community		
Purpose	Mental	Mental
Financial	-	Not considered for this study

Fig. 1:Theoretical framework of the study
 Source: author

Elements of the above two frameworks were combined as per the table above (Fig. 1) to obtain a consolidated and simplified framework for this survey. According to the context, community well-being and the social well-being of the *Gallup Sharecare Well-being Index* is consolidated into Social well-being and the financial well-being has been removed from this study due to lack of readily available data during the short time frame. Assessment was conducted on these three essential elements of well-being, namely physical, social and mental.

Methodology

This framework measures the perceptions and the preferences of the people through their daily schedules, experiences and satisfaction. 20 participants from each park (total 60) were interviewed with the Questionnaire which was developed to assess the well-being of the neighbourhood of three selected urban parks in Colombo. It was based on thirteen factors (fig. 2) identified under three well-being attributes such as Physical, Social and Mental well-being related to Subjective well-being.

The three attributes incorporated in the framework by the author have been assessed by measurable attributes defined in Gallup Sharecare Well-being Index (Inc, 2010) and Heuristic framework (Abraham, Kathrin, & Abel, 2009) on Landscape and Well-being as well as the inputs by the author. This study focuses on the impact from urban park to the neighbourhood community with respect to different attributes of well-being as compiled by the author (physical, social, mental). While this method has applied on different case studies in Colombo area to compare the diversion of well-being in different urban parks where people gathered daily.

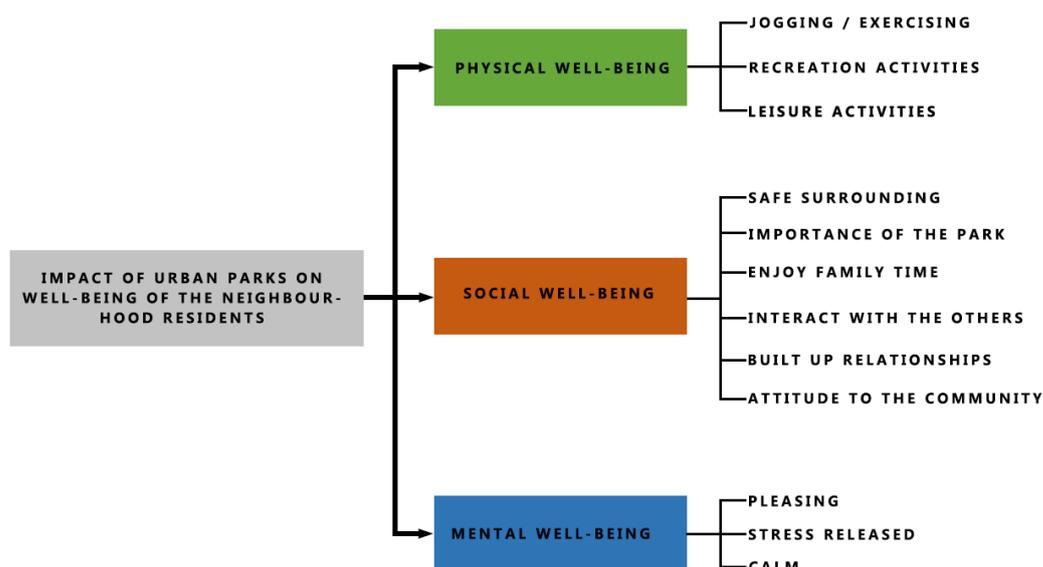


Fig. 2: Structure of the Study.
 Source: author

Case Studies

Among different urban parks in Colombo area, studies were conducted in recently developed, highly functional three urban parks located in residential areas around Colombo. Selected case studies are highly functional with daily residential users and located in highly urban context with surrounding residential community area such as Nugegoda, Bellanvila, Mattakkuliya. All three parks are recently developed.

Wetland Park Nugegoda

Wetland park Nugegoda is located by the Nugegoda-Rajagiriya road in South Colombo suburbs. The surrounding land use is mainly covered by residential and beside the main road commercial activities have been developed while wetland park Nugegoda being a community park and majority of the users are from the neighbourhood residents. The most of the land use around the park is residential and wetland park Nugegoda is daily functioned well.



Fig. 3: Functions in Wetland Park Nugegoda
(Source: author)

Weras Ganga Park Bellanvila

Bellanvila Park is situated by the Dehiwala – Maharagamamain road and 1km away from the Boralesgamuwatown area, a southern suburb of Colombo. Mostly the surrounding land use is covered with residential and mixed residential areas. This park includes about 2.83 km long jogging track, a bicycle track and a cafeteria with outdoor dining facilities. Most of the users are daily users and they engage in physical activities like jogging, exercising and walking while there are a lot of young crowd and children attracted to cycling provided by the park.



Fig. 4: Functions in Weras Ganga Park, Bellanvila.
(Source: author)

Crow Island Beach Park

Crow island beach park is situated 3km away from the Grandpass town, a northern inner-city area of Colombo. This park covers almost 21 acres of the area with a beach front development. This park has multiple functions such as seating, display podiums, watch towers, jogging pathway, cycle track, viewing decks and dining spaces while highly functions with many users and park has uses from many social levels such as high, middle- and low-income people. Majority of the users are low income level people. This park attracts young adults and children.



Fig. 5: Functions in Wetland Park Nugegoda
(Source: author)

Results and Discussion

Comparison between different case studies was carried out from the radar chart analysis from visual paradigm software that use for create data charts and each of subjective well-being factors overlap into one radar chart. The selected case studies were urban parks that highly functioned with different users while these urban parks are support to the Physical, Social and Mental well-being of the users. According to that, all the urban parks support well for the physical and mental well-being of the users. Therefore, in Sri Lanka, these urban parks encourage the physical activities for the nearby resident users thereby increasing their individual physical and mental well-being. It was found that majority of people are assign in jogging and walking by elderly or mature people to maintain a healthy life and most of the recreational activities are assign by young adults (20-30) people. However, it is evident that in all three parks social well-being indicators are comparatively less than the other two aspects.

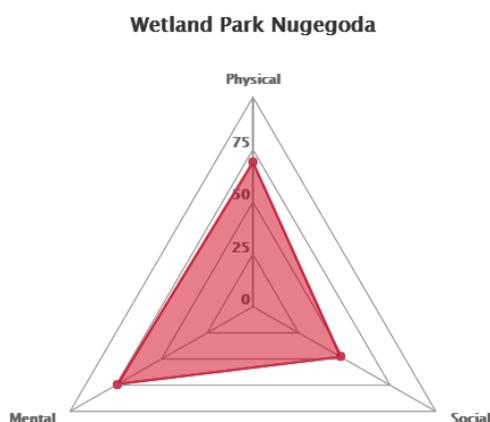


Fig. 6: Supportiveness for the well-being attributes in Wetland Park Nugegoda. (Source: author)

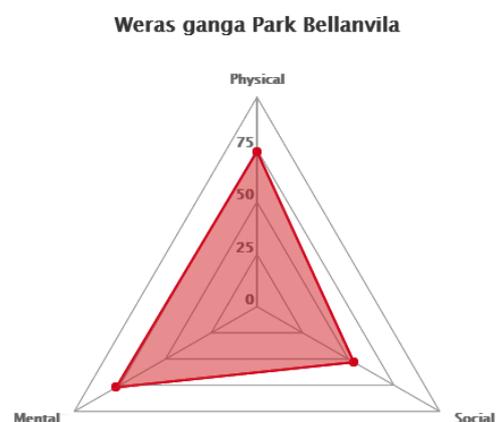


Fig. 7: Supportiveness for the well-being attributes in Weras Ganga Park. (Source: author)

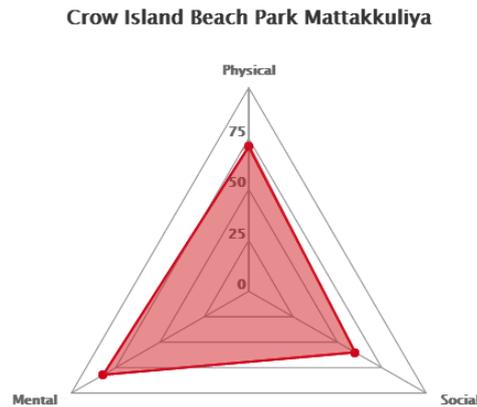


Fig. 8: Supportiveness for the well-being attributes in Wetland Park Nugegoda (Source: author)

It was questioned that in this study, are these social, physical, mental benefits provide by the urban parks are percolate to the user and how much of supportiveness conceive for the user's well-being from the urban park. As visible from above charts (Fig. 6,7,8) supportiveness for social well-being at each park is less than for the other two. Further, the values from the three separate parks were combined in to a single radar chart (Fig. 9) obtain a comparative analysis of all three parks in a single diagram.

Social well-being of each studies different from each other, when the income level becomes lower the incensement of social interaction and common public spaces can be identified. While the social status level become more monotonic, the user interaction getting decreased and due to the variety of users in different social levels in a park support for the interaction getting increased. However, when design spaces or functions of urban parks getting increased the social interactions would be increased. These residential base community park can influence the social interaction among the users. However, it was found that the lack of social interaction was occurred among daily nearby users. It happens because of the lack of spaces to interact and lack of functions available in those parks. Only designing a jogging track and seating spaces are not considerably supportive for the social interactions for nearby resident users. Although some studies noted that social relationships are probably the greatest single cause of happiness(Natvig, Albrektsen, & Qvarnstrøm, 2003) the social coherence is lack in two case studies but some studies noted that none of the reviewed articles proved on thebase of conclusive evidence that urban parks can enhance social cohesion(Fan et al.,2011,n.d.).

Also, Social well-being of the nearby residents has impacted from the urban parks(Warner &Durlach, 1987) and according to the study, when the different social level users migrant to the park, resident users tend to create separate clusters to ensure the sense of safety in the areas they are using daily. All these selected case studies situated in urban areas but Crow Island Park is the only one it has a beach front development and other two park have wetland and a waterbody while an urban park near beach fronts getting highly crowded.

The supportiveness for the mental well-being is depends on the natural environment including the urban park and these urban parks have been developed in natural settings(Kaplan & Kaplan, 1989). However, selected urban parks in Sri Lanka supports the mental well-being of the nearby resident users to fulfill their day to day mental satisfaction. Most supportive park for the mental well-being is beach front crow Island Park and the presence of water can create more mental well-being for the resident users. It is positive that connecting natural environment with the

user will support the mental well-being of the users rather than visually connecting with natural setting.

Conclusion

This study focused on the impact of urban parks on well-being of the neighbourhood residents and this was assessed by the user's preference satisfaction of thirteen identified variables influenced from three well-being factors such as Physical, Social and Mental. Well-being derived from theoretical framework by Gallup Sharecare Well-being Index and Heuristic framework by Abraham, Sommerhalder, & Abel, (2010) on Landscape and Well-being.

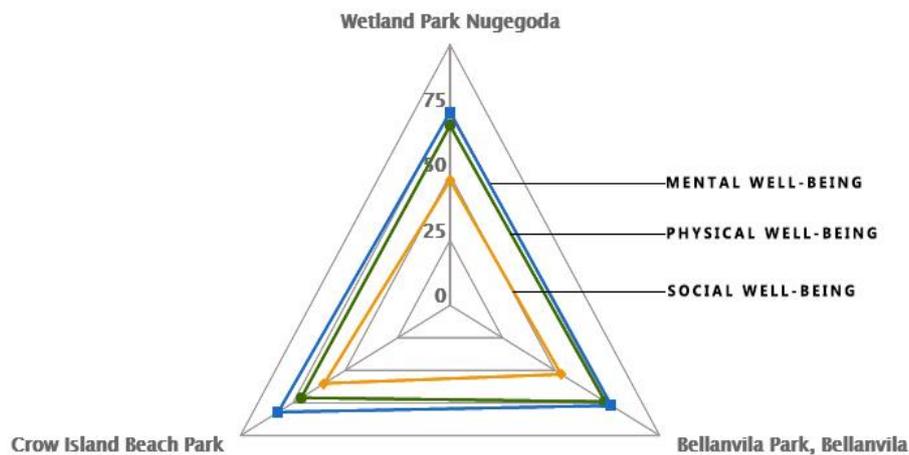


Fig. 9: Physical, Social and Mental well-being variation of each park
Source: author (visual paradigm)

The findings of this research have been revealed that, all the urban parks support well for the physical well-being and the mental well-being of the users. Therefore, in Sri Lanka, urban parks encourage the physical activities for the nearby resident users while the most of the users' interest about the physical well-being. It was also found that majority of people are assign in jogging and walking specially by elderly or mature people to maintain a healthy life and most of the recreational activities are assign by young adults (20-30 aged) people.

However socialwell-being is not delivered strongly by these urban parks according to the research findings. This is clearly evident at every park.

It is also evident that when considering three well-being factors of surrounding residents by a park, social groups with lower income levels tent o havemore increased social interactions. This tend to decrease as the demography changes more towards middle and upper income groups of the society. Mix of social classes tend to slightly increase park interaction levels. When the different social level users migrate to a park, immediate resident users tend to create separate clusters to ensure the sense of safety in the areas they use daily.

Even though social interaction and wellbeing is deemed as a primary concern of designing these parks they have consistently under-performed in this aspect especially with regards to residential community surrounding these parks. While there may be various reason for this one important factor may be due the deficiencies in the park designs. While most of the parks are

provided with jogging track etc. their location and arrangement of seating spaces are not considerably supportive for the social interactions for nearby resident users.

Finally, it can be concluded that an implementation of a park has been both positively and negatively impacted to the well-being of the surrounding residents. Positive are the physical and mental well-being as discussed above. Negatives are the less than desired effectiveness on social wellbeing and the neighbors worries on the safety due increased number of outsiders in the vicinity. This is not to say the Negatives overwhelm the positives. Generally, these parks are appreciated by the community simply because there were no such parks available for the people before. However, these parks could be made more effective without much additional expenses by purely making design decisions more pertinent to the social well-being at the design stages of these parks.

Further research may be conducted which encompasses a range of different types of urban Parks and analyzing other factors such as land value data and residence data over considerable time period to measure the impact on other aspects of well-being such as economy, community, etc.

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