
Research Article**Factors Influencing Public Accessibility to Community Open Spaces in Dhaka City: A Case Study of Mirpur Budhhijibi Complex in Dhaka****Dr. Halima Begum¹, Fatima Kabir Sharna²**¹Associate Professor Department of Urban and Regional Planning Jahangirnagr University²Research Associate Department of Architecture BRAC University

ABSTRACT: A number of socio-psychological factors cause accessibility problems of public open spaces such as parks and playground. However, for ensuring a healthy urban life, some open spaces are essential as taking breath to give a child some fresh air, a little scope of giving the chance of playing. A public open space becomes successful only when it is accessible to each and every person of society. Accessibility is now not only the concept based on the close proximity but also the most important concern for people to make any open space successful with its purpose. Class dynamics and public versus place dichotomy are creating all the possible changes of accessibility condition at any public space. Since this study tries to focus on public accessibility rather than place accessibility, all factors like social, economic, cultural and environmental factors for creating inaccessibility and prohibiting people from using the open space have been identified and analyzed in detail. Factors like social, economic, cultural and environmental factors are responsible for deciding a person's decision to use an open space. This research is an attempt to find out all the prohibiting factors that influence a person to go a community open space.

Introduction

Public open spaces are key built environment elements within neighborhoods intended to encourage various physical activities, provide a number of significant benefits, and serve various important functions that improve the quality of life in cities, (Chen 2016). According to Dhaka Metropolitan Development Plan 1995 'open space' means any portion zoning plot essentially free of structures that serve the purpose of visual relief and buffering from building and structural mass.

In urban and landscape planning studies, the quantity and quality of open spaces in a community have been eliciting increasing attention. Open spaces can promote residents' outdoor activities, which in turn help reduce stress and provide opportunities that promote relaxation. Spatial configuration of parks, their number and their accessibility determines their access potential for residential populations (Chen et al, 2016).

In various studies, the presence of the accessibility to urban open has been emphasized, as lack of it is detrimental to urban life and accelerates disability of a city. Still every day, especially in cities of rapidly urbanizing countries, open spaces are shrinking at an alarming rate, and are becoming less accessible and less maintained. There are numerous discussions on public open spaces of developed world but little discussions have been found about that of developing world. Concepts of urban public open spaces are not new but to look in to it through the contextual analysis, with proper acknowledgement of the resources and limitations, may unravel the path for sustainable open space planning for a developing country like Bangladesh (Afroz, 2009). At densely

populated urban area open spaces must be the most vibrant and accessible. But their importance is forgotten in the debate about architecture and built form. In Dhaka rapid growth of urban population has caused the huge encroachment of open space due to increasing demand on land for housing and other urbanization need. The Neighborhood parks become successful and responsive when they are characterized by the presence of people in an often-self reinforcing process. That is why accessibility, regardless of, if it is measured in time, cost, distance, or population, is the most important variable that one must consider in the early stages of neighborhood planning (Tabassum and Sharmin, 2013). Accessibility is a complex issue and relies on both physical factors and socio-cultural factors. These social factors are generally less obvious but often very significant in determining the quality of users experience (Stoneham 2001). It is essential that the green spaces are accessible. Good-quality, accessible green space can help revitalize communities, encourages inward investment and urban livability (Mowla 2003).

The main attributes of accessibility can be described through three terms; it must be physically accessible, socially accessible and must have activities and use process which is accessible to all (Benn and Gaus, 1983). In the developed country context, research suggests that 80% of users visit open space on foot, and that distance is the major factor in determining use. The accessibility of open spaces is usually assumed to be the most important factor that influences their use a distance of 300 m to 400 m from a user to an open space is considered an important threshold. When the distance is greater than 400 m, the use frequency decreases rapidly (Chen

et al, 2016).

Distance is obviously more relevant to some sections of the community than others. For children, elderly people, lower income groups, people with disabilities and those without access to a car, distance may be the critical factor that influences the use. A distance of approximately 5-6 minutes' walk (about 400 meters) from home seems to be a threshold, beyond which the frequency of use sharply declines. Access to youth and adult play facilities (i.e. grass playing pitches) needs to be specially considered, using rather different criteria where play and recreational facilities for children (equipment for their playing) and young people need to be carefully located. Play facilities need to be easily accessible in residential areas where there is demand ("Open Space Strategy of Poole, 2004"). According to **Accessible Natural Green spaces in Towns and Cities**, the minimum distance criteria should be 280 meters (about five minutes' walk) rather than 500 meters (Harrison, 1995).

Problems of Open space accessibility in Dhaka City

Many developing country cities like Dhaka are rapidly urbanizing engulfing open spaces. Here the roads are crowded with vehicles and air is laden with lead, smoke etc. Within the junk of concrete and polluted environment the green open areas are very essential inside the city for its environmental and ecological balance. Other than this passive need, one of the primary needs of open spaces in urban life is for recreational purposes during the leisure time, (Nilufar, 2000). According to Nilufar (2000), the importance of recreation in people's physical, intellectual and emotional development is now undisputed. It has been reported repeatedly that one of the major reasons for crime in Dhaka city is the lack of proper and adequate recreational facilities. Indeed, recreational facilities and open spaces, which are accessible to the general public, provide an integral and necessary part of urban living, particularly in areas of high density (Nilufar, 2000).

Huq (1989) in his research showed that 39 percent of the people has the attitude of being conservative and introvert because of lack of local green spaces and as they have to be at home with indoor activities. Due to lack of outdoor recreational facilities people engage themselves in home bound and less-active and less-diversionary recreation activities. Nasreen (1990) in a study on recreation and leisure pattern of urban woman observes that a significant number of woman prefer to spend their time at home. Only 25.5% of urban woman are involved in outdoor recreation activities.

According to Hossain (2005), only 21.6% of the poor in the city go to parks, zoos and museums for recreation. More than 50% of children—irrespective of age or socio economic background wanted to have a playground within their community and about 85% children wanted to have an amusement park within 3.2 km of their house.

According to Suchana (2013), Public perception and expectation of the quality of urban park and green spaces are low in Dhaka. Whilst other forms of recreation from indoor sports and leisure to computer games are aggressively

marketed to urban populations, a visit to local parks seems to be a less exciting option. Two 'leisure cultures' now co-exist, one is represented by the recreational culture of regular park users, parents with young children, teenagers hanging out, joggers, the other is the fitness cultures based on fitness centers, aerobics, swimming pools etc. while the majority of people walk to parks, the majority of users of indoor leisure facilities drive to them. Fewer and fewer adults and children are walking and cycling, and over time this has contributed to the climate of empty green space, empty streets. Some of the common perceptions are:

- ✘ Children and young people's use of the outdoors has become increasingly restricted and consequently has declined in the last fifteen years. Many children and adults have better access to commercial and household entertainments. They are often encouraged to use these facilities because of parental restriction and fears.
- ✘ Poor quality and badly maintained spaces: Lack or poor condition and inadequate provision of facilities, especially seats, toilets and playing opportunities for children.
- ✘ The incidence of anti-social behavior: There are increasing concerns over the presence of drug and alcohol users, undesirable characters and stranger danger. Older people may feel threatened.
- ✘ Unsafe and unwelcoming: Safety and other psychological issues including feeling of fear and vulnerability. This applies not only to people's own personal fears but also fears for their children.
- ✘ Environmental quality issues such as litter, graffiti and vandalism.
- ✘ Inaccessibility: traffic and badly located green spaces mean they are often too far or difficult to reach safely. As a result parents often do not let children go on their own.
- ✘ Some sectors of society are using green spaces less than others, people over 65, people with disabilities, women, and minor communities.

Poor quality green spaces can appear depressing dirty, dangerous place. At present these factors are major obstacle to the use and enjoyment of parks and green space and to their role in improving the quality of life in towns and neighborhoods.

Objective and methodology of the research

The main objective of this paper is to find out the present scenario of public accessibility to community open space in Dhaka city and to identify the prohibiting factors for accessibility of community open space. In this regard, the study was conducted in a public park.

The methodology used in this study was based on the research questions, the problems to be addressed for identifying the prohibiting factors and also based on the accessibility model based. A questionnaire survey was conducted among 60 users. The participants included the current user group (at the park), and residents from the catchment area who are irregular users. A catchment area of 1 kilometer, surrounding of the complex ground was selected for the identification of non-user groups.

Data on types of activities being performed by the users, details of user groups and current facilities within the park was collected through an observation checklist. Since the interviews were based on both open ended and close ended questions the results have transcribed, tabulated in order to develop the data analysis. The information had been classified into answers categories and expressed as percentage frequencies. The method for analyzing the information was Content analysis from qualitative data analysis method.

Study Area

The name of the selected study area is Mirpur Budhhijibi Shahid MInar Complex. It is situated in Ward no 12 at Mirpur Thana. It has 67 acres of land including graveyard and monument which has been renovated several times and now being used as an open space (Budhhijibi Complex Office, 2017).

It has total 67 acres of land including the graveyard. It has been renovated several times. Now it is used as an open space. The main element of the monument is the 17.68m high, 0.91m thick and 115.82m long curved brick wall, representing the original brickfield of Rayer Bazar where the dead bodies were found. The wall itself is broken at the two ends, demonstrating the depth of grief and sorrow. A 6.10m by 6.10m square window at the south-west side of the wall permits visitor's view to reach the sky behind, that also scale down the immense wall. In front of the curved wall is a still water body from which rises a black granite column, which represents grief, (Budhhijibi Complex Office, 2017).

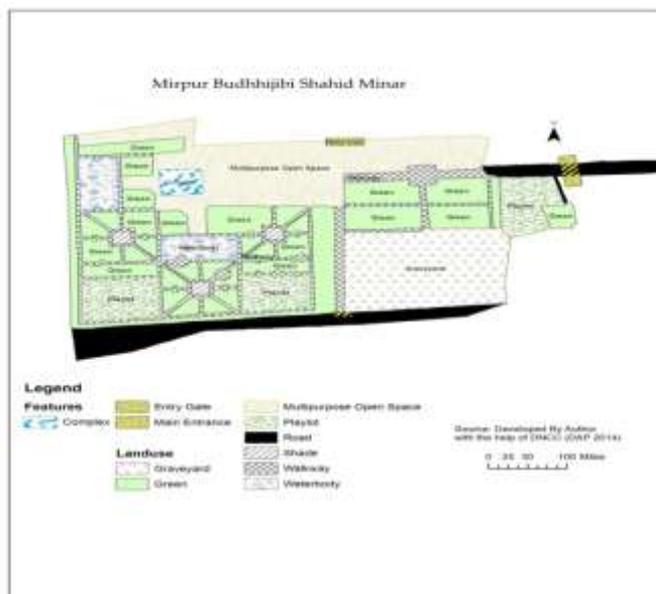


Figure 1: Map of Budhhijibi Shahid Minar Complex, Mirpur Source: Developed by author, 2017 with the help of DAP, 2014 and Budhhijibi Complex Office

The local people come here for walking and enjoying the nature. Young boys and girls come here for playing and cycling. There are paved walkways around the whole place. There are 2 artificial water bodies and several sitting arrangements with or without shades. The whole place is covered with greenery and graveyards. It has a beautiful

scenic view. It is officially open for 2 times in a day 6-10 am and 3-6 pm. It has three entry points. People around the area come here for relaxation and pleasure purpose, (Field Observation, 2017). For study purpose, survey has been conducted in the study area. A catchment area of 1 kilometer, surrounding of the complex ground had been selected for the identification of non-user group.

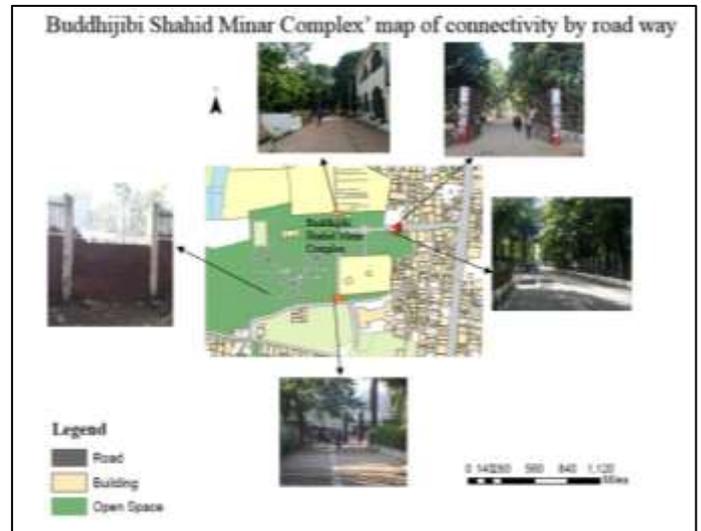


Figure 2: Surrounding road connectivity of Budhhijibi Complex Ground

Source: Field Survey 2017

Major Findings of the research

Perceptions of the user group In the research it was found that Majority of the users of this community open space were males. However, females were also influential users. The open space is being used by all age groups almost in the same ratio. The socio-economic profile of the user groups reveals that most of the users were from middle income group. The occupational pattern of the user group shows that majority of the users were students in occupation. An analysis of the purpose and time of visiting the open space shows that people go for recreation in both of the prime time as morning and afternoon. But in maximum cases, walkers use in morning for their walking and exercise activities. Frequency of visiting of the user ratio is respectively 54% in morning and 46% in afternoon.

It has been revealed that people from inside community visits the park mostly with a frequency of 2 days and 3 days and the percentage is respectively 34.3% and 22.86. In maximum cases, inside community people can visit the park mostly for 2 or 3 times in a week since they have other options, as staff quarters play lots, school playground. In the context of Budhhijibi Complex, the main purpose is exercise to keep fitness (45.7%), which includes jogging, free hand exercises. Some come for spending relax time with family and friends also.

The findings of the research confirm that distance is an important element for determining accessibility. It was found that majority of the people cover their distance to reach the open space by walking and think it is as the most convenient

way. Another convenient way for community and outside user is non-motorized transport. A short ride in rickshaw is the favorite way for most of the users to reach there.

Accessibility conditions for disabled people were found to be good. Due to the paved walkways and enlarged ramp, a person with wheelchair can travel with convenience. Almost 80% people thought that the park is accessible to all irrespective of gender, however, 20% answered negatively on the question of the entrance of third gender people.

Since it is a government property and maintained by individual authority, there is no example of restrictions of using for common people. Almost 97% people answered positively in the question of restriction and unauthorized occupancy. Since it is a government property, it remains accessible for all people in the context of entrance. Only before 1 month of intellectual day celebration, it remains closed for users. As previously mentioned, the main attraction for the people are the paved walkway, shade and the natural beauty of the open space.

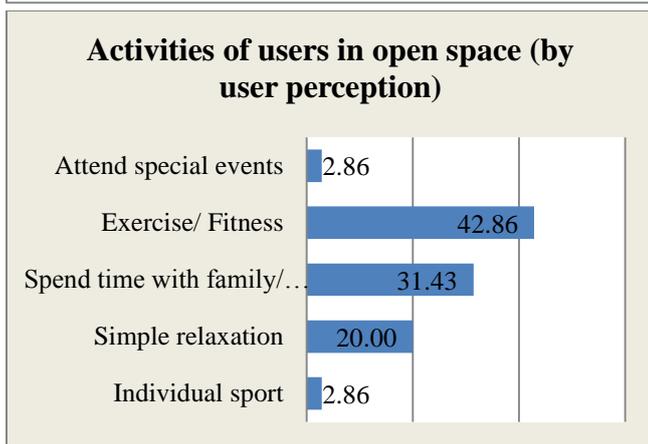


Figure 3 & 4: Purpose of visiting open space and activities
Source: Field Survey 2017

The analysis shows that people did not feel safe visiting the open space after sun set. The users feel insecure as the population is too low in the evening. According to majority of the respondents, after dusk the area is a safe ground for different criminal and anti-social activities such as drug dealing, prostitution etc. which discourage them to go there.

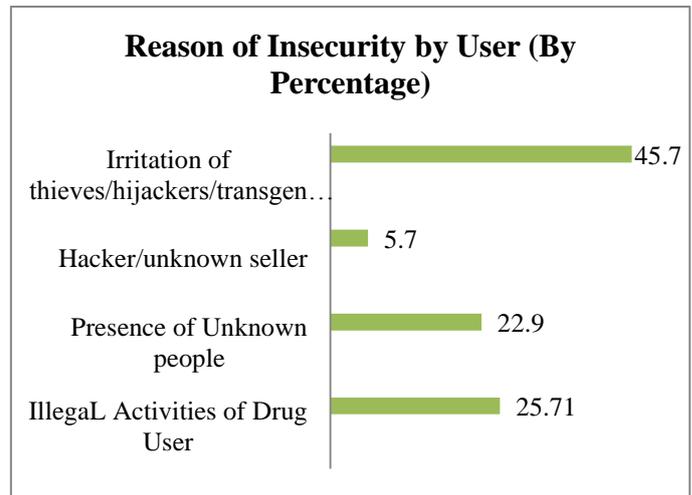


Figure 5: Reasons of insecurity for using Budhhijibi Complex
Source: Field Survey 2017

In the context of quality attribute of this study area, the major resources have been identified as the paved walkway and footpath, which provides user the enough space and privilege for walking. Trees over the boundary are also preferable assets for users. Most of the people are satisfied with the overall cleanliness of internal environment. People were found to be happy with the present waste management system. There were well structured dustbins and city corporation staffs collected wastes on regular basis.

Most of the users choose to walk to reach in the study area. But for irregular and long distance users, NMT is essential and cost to reach there is about 20-50 tk for most of the people. Religious and cultural activities as for example, celebration of national days, last prayer for the deceased people, waj Mahfil (46% people have remarked) etc. are the major cultural activities of Budhhijibi Complex. This open space are being used for these purposes.

Perceptions of Non-User Group

The findings showed that 96 % households, who are presently non users, used to go the open space before. They mentioned their personal reasons as lack of time, work load etc. for not using the open space. It is revealed from field survey that the main reason for not using the open space is their personal reason and it is 32%. 52% non-users showed time bindings and 1% said other things as their perceptions for not using the open space.

From this following figure it is revealed that among the non-users who stopped the use of the open space the reasons are 40% due to the fear of crime/molestation, 28% due to too much crowd, 12% due to insecurity, and 8% for both due to distance and unhealthy environment.

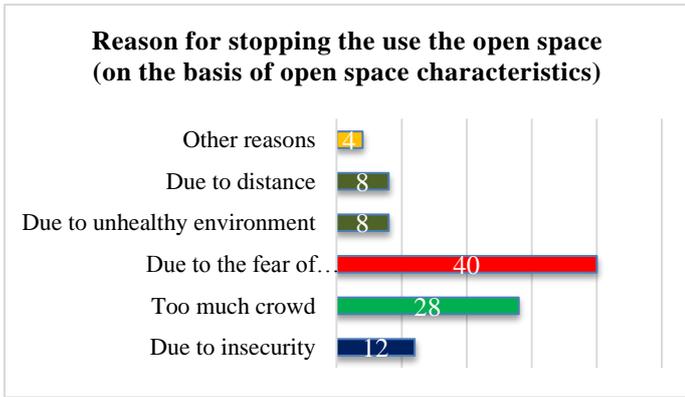


Figure 6: Reason for not using the open space

Source: Field Survey, 2017

In detail conversation non-users have described their opinion for the reasons of stopping the use of open space for the fear of crime and molestation. Huge crowd and illegal activities are also responsible.

The pie chart provided the percentage of prohibiting factors for using the open space. It revealed that 64% of the non-users do not go to the open space due to social factors, 20% due to cultural factors, 12% due to economic factors and 4% due to environmental factors.

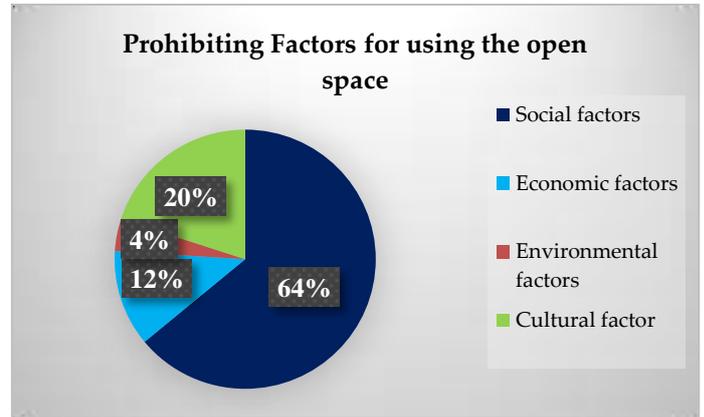


Figure 7: Prohibiting factors for using open space

Source: Field Survey, 2017

For non-user group and for both gender, environmental factors are less important prohibiting factor and social factors are major prohibiting factor for both gendered users.

In the context of correlation with prohibiting factors, social factors are major contributor which describes that both male and female group users face most difficulties. On the other hand, female group doesn't face any problem in the context of environmental factors.



Figure 8: Problems of Budhhijibi Complex in photo gallery,

Source: Field Survey 2017

All the prohibiting factors can be summarized through following points:

Social Factors: Due to the occurrence of illegal activities, the social factors like male female presence ratio, presence of different occupational people, preferable using time, improper waste management system, safety issues etc. are responsible for accessibility are greatly hampered. On the other hand the physical infrastructures of the open space are well furnished with natural beauties.

Economic Factors: Economic factors as like transportation fee, monthly cost for accessing the open space are less vibrant for the case of this study area. In spite of having accessibility for all class people and specially for lower class people, maximum are satisfied with the rate of transportation fee from outside community and for insiders, it's very little.

Cultural Factors: Due to the existence of martyred monument of intellectuals and graveyard, different religious and cultural activities are organized which hampers accessibility of user people for a certain period of time. Activities like Waj mahfil and prayers happen occasionally and affect people for little extent.

Environmental Factors: Since the park is well equipped with furnished infrastructure, environmental factors were not found to be influencing accessibility for both user and non-user group. Environmental factors like natural beauty, greenery, weather fluctuation as heavy heat or rain didn't impact much for the users.

Conclusion

From this research, it can be concluded that, accessibility is not only dependent on close proximity now; people are ready to compromise with distance for a better open space. In Budhhijibi Shahid Minar complex, major attraction factors are the natural greeneries and long walkway and holiday destination for lower income group people. But accessibility differs in spite of having lots of resources due to the satisfaction level of users for safety. In the context of this study, safety issues such as anti-social activities by sex workers or drug consumers are most prominent social factor which influences the accessibility. Moreover, people overlook many other factors like transportation cost or monthly expenditure for open space access, they just want to access it at any time with safety. Environmental factors like weather condition don't make disinterested the user group. Since present non user group people are more concerned for safety and crime rate, it is necessary to take appropriate steps as soon as possible to make this space more accessible for all people.

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