

## **Built Environment and Urban Features towards an Aged Friendly City: A Study on Dhaka City**

**M. D. HOSSAIN<sup>1</sup>**

<sup>1</sup>Lecturer, Department of Humanities, Rajshahi University of Engineering & Technology (RUET), Bangladesh

### **Abstract**

Population ageing and urbanization are two global phenomenons that together comprise major forces shaping the 21st century. Dhaka as the capital city of Bangladesh with 17 million people and also a megacity of the world has been facing miserable sufferings. And the city also has to bear approximately 10% population out of its whole as elderly community. This paper tried to investigate the situation of Dhaka city with the comparison of an ideal aged friendly city Guided by World Health Organization. To this end, major nine standards were investigated and findings were discussed in a qualitative manner. Significant findings of this study is about the existing situations and possible way out of pleasant and clean environment, green spaces and social forestry, rest and recreation, pavements and pedestrian crossings, accessibility, adequate public toilets, older person friendly housing and institutional services, civic participation, employment, community support and health services of Dhaka city.

**Keywords:** *Built Environment, Population Ageing, Older Persons, Aged Friendly City.*

### **1 Introduction**

Bangladesh experienced the highest rate of urbanization in the past three decades in South Asia, which is 4.19%, while the urbanization growth during the same period was 2.87% in India, 3.41% in Pakistan, 0.37% in Sri Lanka, and 5.74% in Nepal. (Dhaka Tribune, 2014). About 28 percent of Bangladesh's total population (41.7 million) is living in urban area. Titled "Human Development in South Asia 2014 – Urbanization: Challenges and Opportunities," report reflected the effects of such "unplanned" urbanization has left the urban population with inadequate facilities (Newyork Times, 2015). It created infrastructural challenges and service gaps, including inadequate access to transport, housing, water and sanitation, solid waste management, energy, health and education. Like the other developing countries, Bangladesh could not ensure the basic facilities of urban life to its large number of inhabitants, which made Dhaka city nearly uninhabitable. And the country has the highest number of slum dwellers – 60% of the urban population – in the South Asian region, according to a report launched by UNDP (Rahman, 2011). They do not have access to their basic rights, such as fresh water and sanitation, education and health services, which would be ensured if the urbanization had followed a proper plan. According to the Far Eastern Economic Review, Dhaka will be home to 25 million people by the end of 2025(Dhaka Tribune, 2014). According to environmentalists and urban planning experts, Dhaka has already started feeling the heat of an overcrowded populace with traffic jam and water-logging becoming almost a routine problem. Titled "World Urbanization Prospects: The 2014 Revision", the UN report projected Dhaka would become the 6th most crowded city by 2030 with a population of over 2.7 crore. By 2050, the majority of the world's megacities will be in Asia, according to the report. (Daily Star, 2011). Most importantly the world is rapidly ageing; the number of people aged 60 and over as a proportion of the global population will double from 11% in to 22% by 2050. By then, there will be older people than children (aged 0–14 years) in the population for the first time in human history (World Bank, 2007). Bangladesh is also currently undergoing a demographic transition and the proportion of the population 60 years and older is rapidly increasing. Bangladesh's elderly population is one of the largest in the world in terms of absolute numbers. Currently, older people account for around 8% of the country's total population, amounting to roughly 11 million people. By 2050, the 60+ population will account for 20% of the total population-a four-fold increase from the present time. The increase in elderly population in Bangladesh during the period 1990-2025 is projected to be much faster (219%) than that of European countries such as Sweden (33%), UK (45%) or Germany (66%)(Rahman,2011).Though

authentic data is not available on the exact figure of older persons currently living in Dhaka City, but keeping the consideration of whole population of the country it can be easily reported that nearly 10% city dweller are belonged to age group of 60 and above. As this group having severe vulnerabilities, the city has no significant level of services, benefits etc to make their life comfortable.

World Health Organization (WHO) developed and practiced a guideline for promoting aged friendly city. As per the guide; an age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age. In practical terms, an age-friendly city adapts its structures and services to be accessible to and inclusive of older people with varying needs and capacities. To understand the characteristics of an age-friendly city, it is essential to go to the source – older city dwellers. By working with groups in 33 cities in all WHO regions, WHO has asked older people in focus groups to describe the advantages and barriers they experience in eight areas of city living (WHO, 2007). Undoubtedly the existing situation of Dhaka city is a nightmare of being aged friendly city but this study tried to investigate the strengths, and challenges of the city against the 15 major parameters developed and promoted by World Health Organization (WHO). Simultaneously the study urged to imply and consider the issues of aged friendly city while operating developmental policy, plan and programs of Dhaka City.

## **2 Objectives of the Study**

The primary objective of this study was to investigate the build environment and urban features of Dhaka city towards an aged friendly city as per the guideline of World Health Organization (WHO). In regard to this, following objectives were occupied by the study simultaneously:

1. To investigate the situations, strengths and weakness of Dhaka city in the way of developing aged friendly city.
2. To identify the demands and actions required to this end.
3. And to facilitate suggestions towards promoting aged friendly features in Dhaka city

## **3 Methodology of the Study**

This study was qualitative in nature. It was mainly a secondary data based study, but case study also a major way of collecting Data. Different journals, newspapers, research reports, books, online resources etc. were reviewed to accumulate secondary data. Ten case studies were conducted to get primary data. These case studies were incorporated the aged adults living in Dhaka cities as well as government and non-government authorities facilitating services to the city dwellers. Data were collected by considering the checklist for case study and purposively to compare with the guideline developed and promoted by World Health Organization towards aged friendly city. After collecting raw data by using tape recorder, note keeping etc. these were gone through a series of qualitative analysis.

## **4 Findings Analysis**

As per the methodology of this study, this paper tried to compare the standard of World Health Organization (WHO) in analyzing the qualitative and quantitative data from secondary sources and in some extent conducting relevant case studies and observations on study area. Details findings and discussion of the study are mentioned as follow:

### **4.1 Standard-1: Pleasant and clean environment**

Dhaka is painstaking to be congested and difficult for older adults to get around. This is not a particular attention for aged population at all; most of the dweller in this city is highly concerned about the absence of pleasant and clean environment. Though living close to the river in the periphery of Dhaka city is seen as a definite advantage, prevailing four peripheral rivers are severely polluted and not simply usable for fresh water. Garbage, dustbin, sewerage etc are the curse for and not systematically managed in most extent. A Daily Star published article reported that “Garbage in the Dhaka city has posed a major threat to health and sanitation. In most cases, garbage is not picked up for days together. In the jam-packed city suburbs, filthy water and human excreta along with other human wastes in choked drains stagnate throughout the year till the rainy season washes a part of them out to the river Buriganga. The city's garbage collection points in the old areas are nothing more than rotting open heaps of refuse” (Daily Star, 2011). In fact this is not the actual scenario of Dhaka city perhaps the condition is

more deteriorating. An aged friendly city guarantees its citizens access to clean and safe water for drinking and other daily uses. But these features can be hardly found in Dhaka city.

City authorities including WASA or DCC are not capable enough to regularly monitor the quality of water delivered at the tap and keep dwellers informed of the quality. Abdul Wahed, a 67 years aged adult living in Paribagh area urged to pay government attention to supply the minimum amount of water having no dirt and bad smell. Department of Environment (DoE) pointed out that air pollutant (SO<sub>x</sub>, NO<sub>x</sub> and CO<sub>2</sub>) levels in Dhaka city are about 4 to 5 times higher than the prescribed levels of Air Quality Standard (AQS) in Bangladesh. Such pollutants remain and persist with air due to lack of tree coverage. A study of BAPA (2002) pointed out that air pollution causes headache, burning of eyes, pain in throat, bronchitis, breathing problems, heart disease, anemia, mental problems, kidney disease and even cancer. According to experts, about 33% of Dhaka dwellers suffer from hearing problems due to noise pollution (bdnews24.com, 2011). Most of the cases from adult group urged that air pollution seriously affects their health, and its intensity is really high in Dhaka city. Officials of the different authority also agreed about the damages of ecosystems and causes deterioration of buildings and monuments due to air pollution. Another concern is growing about the effects of exposure to hazardous substances because of their potential harm to human health and so there is a need for careful monitoring, review and regulation of chemicals in general. In this context Dhaka is very much prone and having toxic environment everywhere. And these are highly worsened for the city dweller and very particularly to the older adults.

#### **4.2 Standard-2: Green spaces and social forestry**

Having adequate green spaces is one the most commonly mentioned age-friendly features as per the WHO guideline. Green spaces, quiet streets and recreational parks are important for relaxation. According to World Health Organization (WHO) there should be 9 sq. meter green space per city dweller for ensuring better life. In developed countries, normally, they have more trees (more than 20 sq. meter green spaces per city dweller) to meet the ecological balance for human well-being compared to cities in developing countries, which often fall below the minimum standard of open green spaces set by WHO (WHO, 2007). For example, most of the cities of China have 6.52 sq. meter green coverage per head. FAO (2008) pointed out that Dhaka city has 21.57% open space of which city parks occupy 0.89%, urban forestry 0.02%, gardens 0.90% and 12.12% belongs to agriculture (Abul Barkat, Avijit Poddar and Manjuma Ahsan, 2013). The green space has been reducing gradually while increasing is the number of buildings without considering environmental protection. According to the Chief Town Planner of Dhaka City Corporation (2014) by its web site, an ideal city needs 20% area covered by trees but there is only 8% vegetation in the city. Currently, almost 15 million dwellers of Dhaka city enjoy very limited ecological services from Ramna Udyan, Sohrawardy Udyan, Dhaka University campus, National Parliament Bhaban complex, Usmani Udyan, Botanical Garden and National Zoo etc. For last 14 years, high temperatures have been experienced in Dhaka city. Bangladesh Meteorological Department (BMD) source informed that the gap between maximum and minimum temperatures of Dhaka city has gradually increased, resulting in hotter summers and colder winters. The urban heat has sharply increased in the recent decades. (Daily Star, 2011). The study found the century old trees in Dhaka city are reminiscences of the past efforts. Unfortunately, most of these trees were cut down in the name of development activities. During the last two decades, there have been large scale plantations of trees in the country including along the roadsides, avenues, highways, railways and other places in the cities also a positive significant findings of the study. Road dividers, roof of the residential, educational and corporate buildings also transformed a common ground for massive plantations and gardening.

#### **4.3 Standard-3: Somewhere to rest and recreation**

The availability of seating areas is generally viewed as a necessary urban feature for older people. It is difficult for many older people to walk around their local area without somewhere to rest. There are very few seating areas in DMP area. Md. Sobhan Miya an aged adult expressed his observation by saying *"I just can't imagine going any cinema hall or public places for recreation due to stereotyping attitudes and negative remarks from surroundings and it is a common phenomenon"*. At the same time no special places can be found in the study to have the room for older persons and their recreation. Major recreational hubs as the study found in Dhaka today are mostly clubs, restaurants, cafeterias, shopping malls, hotels, gaming zones, amusement parks, bowling alleys, Cineplex's, movie theaters, galleries, stadiums, open fields, parks. There has been a notable increase in number of recreational spots over the years but not favorable to older persons. Commendable approaches are establishment of Botanical Gardens at Mirpur and Suhrawardi Uddyan at the old Race Course ground in Dhaka city. Various indigenous and exotic tree species have been planted in the gardens. The establishment of Balda Garden by a private endeavor is a highly praise worthy effort. The Zoos in Dhaka city have also been covered with trees. (Satter 1999). Unfortunately study did not found older friendly recreation and rest in those places. Television is the common source of recreation, but family members are not paying attention to the older persons

demand or choice in this connection and Tel. Ms. Rabeya Sultana a retired college teacher lived in Uttara area said *“We have a mega size (big monitor) television, but frankly I have no choices as daughter in laws and their kids are not satisfied to those programs”*.

#### **4.4 Standard-4: Age-friendly pavements**

The condition of pavements has an obvious impact on the ability to walk in the local area. Pavements that are narrow, uneven, cracked, have high curbs, are congested or have obstructions present potential hazards and affect the ability of older people to walk around. (WHO, 2011). The study found hawkers and other encroachers are controlling the pavements without any serious interference from law enforcers. Simultaneously building material piled on city streets block part of pavements also, while a number of market and restaurant owners use pavements as their parking lot. Even buses are choosing their stoppages at will and ticket counters occupy large portions of pavements, making it difficult for pedestrians to have a free walk. Spates of unplanned digging of streets by different utility services often leave large potholes creating traffic bottlenecks during the rainy season. On the other hand, pedestrians run the risk of being hit by a brick or concrete slab from under-construction buildings. Across the street besides the Secretariat building, any careless pedestrian can simply disappear inside a manhole, some of whose iron covers have been stolen. Study also found the experience of a case from Dhaka South City Corporation area and working for the corporation itself said that *“I had a fall due to the pavement and broke my Shoulder”*.

#### **4.5 Standard-5: Safe pedestrian crossings**

The ability to cross the road safely is an often mentioned concern, and it is reported that several cities around the world have taken steps to improve the conditions for people crossing the road. No doubt there are significant numbers of over-bridges and few tunnels also built in Dhaka city to assist pedestrians to cross roads. Dhaka North City Corporation (DCC-North) website showed currently there are 34 over bridges are functional for safe crossings. Harsh reality is that most of the over bridges in Dhaka city are under the possession of hawkers and beggars (Dhaka North City Corporation Office, 2015). Mouchak, Newmarket, Uttara Azampur and Mirpur foot over bridges are the representation of this study. Simultaneously these over bridges are not aged friendly, as it can be easily perceived that those are really hard job to climb for elderly. The study observation found a report on Daily Star that revealed that *“The busiest area of the city is Mirpur Number 10 called Gol Chattar where four important roads converge. Every day a large number of people pass through the Gol Chattar over bridge. But it is used as a meeting place of slothful people and become overcrowded and women are harassed. There have been cases of hijacking also. Furthermore, there are many over bridges frequented by floating sex workers. Traffic system also a complex way to safe pedestrian of most of the urban dwellers and aged adults are not exceptions. The study also found the existance of the country’s first escalator, a moving staircase driven by motor, on the Airport road from Sainik Club to Road 11 of Banani in the capital and started the very early months of 2016.*

#### **4.6 Standard-6: Accessibility**

In both developed and developing countries, most of the people think that their city was not designed for older people (WHO, 2007). The WHO report also mentioned the case of a Kenyan Older person and told about the accessibility of older persons in urban setting *“I only go into town when I have something specific to do. I go there and finish what I am doing and come straight back home. Why would I want to walk around the city? I am not a young person”*. The study also asked the older persons (cases) of Dhaka city and most of them agreed by saying they are not interested to move around the city or gathering areas as their physical strength are not fit enough to deal with. Most respondents are agreed about barriers to physical access, which discourages them from leaving their homes. Most of the physical structure of the city is pointed out that the concrete ladders to access the city gatherings are difficult for older people to use. Md. Rabiul Islam Mridha another case expressed his opinion about the absence of aged friendly accessibility in city structure. He replied *“ My physical capacity are not afford enough to climb the buildings, crossing roads and even no privilege in transportations or seat in the bus”* against the question of his view on about the accessibilities of Dhaka city for older peoples.

#### **4.7 Standard-7: Adequate public toilets**

The availability of clean, conveniently located, well-signed, handicap-accessible toilets is generally regarded as an important age friendly feature of the built environment. In fact Public toilets matter to everybody. They have huge public health implications. Unfortunately, this issue remained under-focused until now in the policies and the programmes in the context of Dhaka city. Undoubtedly this huge population of the city needs the service of public toilet facilities to meet their demand. Unfortunately, the issue of supply and demand of this important

facility in Dhaka City has not been studied comprehensively and drawn attention of the policy makers. Centre for Urban Studies conducted a study on the public toilet system of Dhaka in 2007 which could not be disseminated properly due to the then political and aftermath situation. Currently the city originally had 69 public toilets constructed but two were demolished on the excuse of blocking footpaths. Out of the remaining 67 toilets, only five are fully operational. It is found that most of the toilets are partially in operation with regular maintenance. Shockingly, many toilets are being used by the local operators to wash cars, sell water, sleep, or as small shops. Only 43 per cent of these toilets has regular water supply and just 20 per cent of toilets have functional lighting facilities (Financial Express, 2013). Although the lack of public toilets in Dhaka affects both sexes, men have the distinct advantage of being able to take to the streets. But for the both women and older sections, the toilet crisis is really miserable as study observed.

#### **4.8 Standard-8: Older person friendly housing and institutional services (Old Home)**

Housing status is often a major indicator for economic and social base for development status of the individual and family. The problems of housing of Dhaka city as well as in other metropolitan areas of Bangladesh are very acute. Dhaka city requires between 55,000- 83,000 housing units each year, whereas all public and private efforts together can only produce 25,000 housing units a year (Nawar, 2004,). The Government of Bangladesh is unable to provide adequate housing for the ever -increasing urban population. According to an estimate around 35% of the Dhaka city populations live in slums and squatters due to low-income migrant people from rural areas in search of job and urban amenities (Habitat International, 2014). Along with the population growth, the demand on housing and related facilities of these migrant and city population is growing in an alarming rate. The worsening urban housing situation, especially for low income group, is caused by rapid population growth, shortage of urban land, poor economy, poverty level of low income group, housing policy and climatic factors. As per the data provided by the ministry of Housing and Public Works, there are only 24,000 government residences in the country against around 1.3 million public servants. The rest of the houses are in the district and upazila towns. Of those, around 15,000 houses in Dhaka and Chittagong cities. There are about 13,000 houses in Dhaka against 200,000 public servants (Begum, Jasmin Ara and Amin, Imran Ebne, 2012).

It is clear that housing and support that allow older people to age comfortably and safely within the community to which they belong are universally valued. As the city dwellers facing sever crisis to manage housing demand, then the amenities for older persons can hardly be found. Within the existing housing pattern, older person/s among the family member are not getting consideration in terms of choice of having bed rooms, toilet, bathroom etc. as the study found. Currently the government planned to construct 400,000 flats in four satellite townships around Dhaka to solve housing problems (bdnews, 4 February, 2010). The government has set up six free shelters as Shanti Nibash, one each in divisional headquarters providing food and shelter for residents. The Bangladesh Association for the Aged and the Institute of Geriatric Medicine with financial help of the Government has established a Senior Citizen's home where various services are provided to elderly people. A number of homes have been established through private initiative. There are a number of old homes located in and around Dhaka. In Gazipur, Dhaka a big old home has been established by private initiative. Some of these homes provide recreational facilities as well as basic services. A study of old homes in Dhaka shows that 47% of the residents are there because they have no one to look after and over 60% are male. In Dhaka city the number of existing Old People's Homes is much lower than the demand. In addition, many living in Old Home face a considerable social stigma, primarily because this is very new concept in our culture (Begum, Jasmin Ara and Amin, Imran Ebne, 2012).

#### **4.9 Standard-9: Civic participation, employment, community support and health services**

Dhaka city is the hub for job seekers around the country. But there are significant rate of unemployed people struggling to manage a job. Current unemployment rate is 24 %around the country (NIPORT, 2009). In this circumstances employment creation or opportunities for older persons are really negligible. The study conducted case studies on 10 older persons in Dhaka city, out of them 4 were still working in private firm. Study also found that older people do not stop contributing to their communities on retirement. Many continue to provide unpaid and voluntary work for their families and communities. In Many older people would like to continue working and some, in fact, do so. But rest of the observations found mostly the absence of aged friendly employment opportunities, work environment and stereotyping attitudes towards elderly employees. In fact most of the cases agreed about the absence of access to employment and volunteer opportunities and in general. They would also like to see more efforts made to encourage civic participation and feel there are barriers to participation, including physical barriers and cultural stigmatization, surrounding participation by older people. The study found older people everywhere voice a clear desire for basic health and income support. A basic shortage of necessary services and supplies is observed, and in others, services are found to be poorly distributed. In old age, high prevalence of morbidity is a common feature and health care expenditure for the elderly persons is much

higher compared to the younger adults. There is also disregard for the nutritional needs of older people, as nutritional assessments tend to focus exclusively on the under five-year-olds, without taking representative samples of nutritional status among other age groups. Empirical data from Bangladesh indicates that health services for older persons suffer from a lack of coverage and the inadequacy of existing services to meet older people's needs. In most low-income countries such as Bangladesh services retain a curative bias, and there are few examples of successful nation-wide promotion campaigns for elderly population. The special health needs of older people have not been considered a major issue by either the government or the NGOs to a substantial extent. The large majority of the health-care seeking population goes to unqualified practitioners providing various kinds of treatments that are frequently sub-standard, ineffective and harmful. Empirical data from study area indicates that health services for older persons suffer from a lack of coverage and the inadequacy of existing services to meet older persons need.

## 5 Conclusion

Older people are a resource for their families, communities and economies in supportive and enabling living environments and city areas are not exception in this context. Dhaka as the capital city of the country needs to formulate policy, plan, program etc. and make it a better place to live in and definitely for all section of the population. As it is not possible to stop our ageing process and progressive rate of elderly population, it will be really praiseworthy and time oriented to make the city more aged friendly. And this is not only for the sake of helping the elderly or making their life comfortable rather to make the life smooth and resourceful by utilizing their experiences for all of us. As per the World Health Organization Guideline for promoting and ultimately establishing an aged friendly city, the study tried to compare the strength and opportunity of the city, simultaneously weakness and threats or challenges also got high concern. For promoting an aged friendly city government along with concerned bodies and city dwellers should come forward to make the senior citizen's life meaningful and livable.

## References

- Anam, Tahmima. 2015. Bangladesh's very public Toilet Crisis. The New York Times. Dated on: May 21, 2015, New York, USA
- Barkat, Abul. Poddar Avijit and Ahsan Manjuma. (2013) Impact of Social and Income Security for Older People at Household Level, Human Research Development Center Dhaka.
- Bangladesh Bureau of Statistics. 2007, Population Census 2001, National Series, Volume-1, Analytical Report, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.
- Bangladesh Bureau of Statistics. 2008, 2008 Statistical Yearbook of Bangladesh, 25th edition, BBS, Ministry of Planning, Peoples Republic of Bangladesh
- BDNEWS24.COM. 2010. 4 lakh flats' to ease Dhaka housing woes. Dated on: February 04, 2010. Dhaka. Bangladesh.
- Begum, Jasmin Ara and Amin, Imran Ebne, 2012. Low Income Housing in Dhaka City- Vasantek Rehabilitation Project as a Case. World Review of Business Research Vol. 2. No. 3. May 2012.
- Dhaka North City Corporation. 2015. Transport Department. Available at: <http://dncc.gov.bd/transport-department/>
- Dhaka Tribune. 2014. Half the Urban Population in Bangladesh Slum Dwellers. Dated on: November 18, 2014. Dhaka. Bangladesh.
- European Union. 2010. Making our cities attractive and sustainable; How the EU contributes to improving the urban environment. Luxembourg: Publications Office of the European Union. ISBN 978-92-79-16298-5 doi: 10.2779/42720
- Habitat International, 2014. Presentation on Critical shelter problems; Habitat's initiatives, Urban Dialogue – 2013. Dhaka, Bangladesh
- Nabi, ASM. Mahbubun. 2008. To solve the transportation problem of Dhaka metropolitan area. Daily Star. Dated on: June 14, 2008. Dhaka. Bangladesh.
- Nawar, R. 2004. Right to shelter: Bangladesh', International Conference on Adequate and Affordable Housing for All, Centre for Urban and Community Studies, University of Toronto, Canada.
- NTV Online portal. 2015. Public Servants' accommodation problem to go as govt. plans projects. Dated on 04, September, 2015. Dhaka. Bangladesh.
- NIPORT. Mitra and Associates and Macro International (2009), Bangladesh Demographic and Health Survey .2007. National Institute of Population Research and Training (NIPORT), Mitra and Associates, Dhaka and Macro International, Calverton, Maryland University.

- Rahman, K.M. Mustafizur. 2011. Preparing for an elderly population. Daily Star, dated on October 04, 2011. Dhaka Bangladesh.
- World Bank Document. 2007. Dhaka: Improving Living Conditions for the Urban Poor, Bangladesh Development Series, Paper No. 17, The World Bank Office, Dhaka, June 2007.
- UN-ECOSOC. 2006. World urbanization prospects: the 2005 revision. Fact sheet 7. Mega-cities. New York, United Nations Department of Economic and Social Affairs, Population Division.
- World Health Organization (WHO), 2007. Global Age-friendly Cities: A Guide. Active ageing: a policy framework. Geneva, World Health Organization.
- Population *Ageing 2006*. New York, United Nations Department of Economic and Social Affairs, Population Division.
- Trading Economics. 2015. Urban Population in Bangladesh.