

Planning Standards for Playground Facilities in Urban Areas: National and International Perspectives

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Abstract: Playground is considered as a significant element of city planning, therefore play facility planning demands special attention while designing of cities and neighborhoods. Playgrounds are of varied types namely playlot, playground and playfield – depending on different age group of users. This paper primarily focuses on play facility standards followed in various cities and countries in the world as well as play facility standards and provisions in various plans and projects in Bangladesh. This paper is based on secondary sources and desk research on the readily available data was conducted for a better understanding of the planning standards for playground across global cities. ‘Time saver standard for site planning’ suggests 1 acre size for a playlot having a standard of 0.25 – 0.5 acre per thousand population and recommends 3 acres for a playground within half mile from residence having a standard of 1.5 acre per thousand population. Detail Area Plan (2010) for Dhaka city suggests 2–3 playgrounds of 1 acre size each for a Neighborhood of 12,500 people. Playgrounds that are accessible for common people are quite few in numbers in major urban areas of the country. Based on the findings of this study, this paper recommends play facility standards for playlot, playground and playfield facilities for urban areas based on planning contexts of Bangladesh.

Keywords: Planning Standard, Recreation, Playlot, Playground, Playfield

1. Introduction

Playground is considered as a significant element of city planning for building sustainable cities and communities. Playground is an important element of neighborhood planning around which community and neighborhood flourishes, therefore play facility planning demands special attention while designing of cities and neighborhoods. Planning standard for community and recreational facilities generally differs for various countries according to their specific planning environment and therefore standards of any country cannot be imitated to other country without detail assessment of demand of that individual area or cross-sections of people for whom it is going to be implied. Recreational facilities includes various types of facilities, but the major types of recreational facilities that are deemed important in preparation of physical plans for urban areas mainly include open space, park, play field, playground, playlot. Playgrounds are of varied types namely playlot, playground and playfield – depending on the different age groups and planning standard for different types of playgrounds differs in various cities and countries. Identification of proper standards for play facilities are at all times poses perplexing for urban planners and policy makers because of the scarcity of lands and their relatively greater values in city areas. As a result, setting appropriate planning standards for playgrounds are quite important for providing proper recreational facilities to ensure vibrant urban life. In addition, Bangladesh, being a developing country, faces the challenges of providing proper recreational amenities like play facilities adequately and with appropriate quality to its urban dwellers as well.

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Different cities and countries have adopted various standards for planning and designing their playgrounds considering their own contexts. National Recreation Association (NRA) Standard of USA proposes a playlot of 220 – 460 sq-m for a population of 300 – 800 for a service radius of 1/8 mile (i.e., 200 m) or for a residential block. ‘Time saver standard for site planning’ suggests 1 acre size for a playlot having a standard of 0.25 – 0.5 acre per thousand population for a playlot and recommends 3 acres for a playground within half mile from residence having a standard of 1.5 acre per thousand population. On the other hand, Detail Area Plan (2010) for Dhaka city suggests 2–3 playgrounds of 1 acre size each for a Neighborhood of 12,500 people whereas Sylhet Master Plan proposed a standard of 2 acres of playfield for every 25,000 population which is quite similar to the standard of ‘Land Development Rules of Private Housing Project-2004’ for Dhaka city. It is widely accepted that searching for a universal standard particularly for recreational facilities is not a right choice for urban planners while designing their particular cities. However, proper understanding of playground standards followed in various cities and countries around the world is quite important for development of planning standards for playground in Bangladesh. This paper primarily focuses on playground standards followed in various cities and countries in the world as well as playground standards adopted in various plans and projects in Bangladesh. Based on the findings of this study, this paper also recommends playground standards for urban areas in planning contexts of Bangladesh.

2. Methodology of the Study

This paper is primarily based on secondary sources and desk research on the readily available data was conducted for a better understanding of the planning standards for playgrounds across various cities and countries around the world. ‘Time Saver Standard for Site Planning’ has also been analyzed for planning standards of different types of play facilities. Planning standards and provisions regarding play and sport facilities practiced for urban planning for various cities in Bangladesh in respective master plans, structure plans or any other relevant plans have also been explored.

In order to get an overall picture of planning standards and provisions of playground facilities in urban areas of Bangladesh, various categories of urban areas have been selected for this study to represent each category of urban areas. Moreover, study areas are purposively¹ selected across various regions of Bangladesh for proper representation of various types of urban areas in Bangladesh.

Six major Metropolitan Cities of Bangladesh have been selected as well as four ‘A’ Category, Three ‘B’ Category and Three ‘C’ Category Paurashavas have been selected for analysis of playground provisions at different categories of urban areas in Bangladesh.

¹ Paurashavas that have prepared master plans for their respective municipalities have been considered for this study.

Table 1: Urban Areas Selected for the Study

Metropolitan City	Paurashava / Municipality		
	A Category	B Category	C Category
Dhaka, Chittagong	Savar (Dhaka)	Daudkandi (Comilla)	Nageswari(Kurigram)
Rajshahi, Khulna	Jhenaidah, Gopalganj	Bajitpur (Kishoreganj)	Kasba (Brahmanbaria)
Barishal, Sylhet	Bhairab (Kishoreganj)	Pirganj (Thakurgaon)	Melandaha (Jamalpur)

Based on the findings regarding playground standard and provisions from international and national practices, planning standards have been suggested for various categories of playgrounds for urban areas in Bangladesh.

3. Planning Standards for Playground and Recreation Facilities: Review of Concepts

Play is defined as a chosen activity that engages the child quite enthusiastically. Play provision hence includes a range of activities and support which requires spaces and facilities to pursue play. This comprises both formal and informal play provision (City of London, 2009).

The planning standard is used to define the minimum area for each use for a certain population or for a definite area. These minimum standards are formulated for a specific area by studying the functional requirements, number of users and other similar parameters (LGED, 2010). The main purpose of recommending planning standards for urban planning is to provide a base for taking planning decisions. The recommended rules and standards are suggestive and can be appropriately adapted depending upon the local circumstances (Rao, 2001).

While re-planning of British cities generally followed a rule to provide 7 acres of public open space per 1,000 persons and this standard is considered applicable where no other standard has been established (Veal, 2008). It is commonly acknowledged that the provision of open space ranges from *10 to 28 square metres per person* (Daley, 2000). In the United States, the National Recreation Association recommended 10 acres per 1,000 persons for neighborhood park and recreation areas and minimum of 5 acres per 1,000 persons, or at least 10 per cent of the neighbourhood area (Brown and Sherrard, 1951).

New South Wales city of Australia followed a general standard that divides the 2.83 hectares into 1.21 hectares for 'active' open space like sports fields and 1.6 hectares for 'passive' open space used for informal recreation). "Playground Association of America" suggested playground space equal to 30 square feet per child in 1906.

Play facilities are considered important and indispensable community facilities to ensure recreational purposes of urban dwellers. Play facilities are generally divided into three types for different age range of population – namely Playlot, Playground and Playfield (Mcgraw-Hill, 1999).

The standard for playlot, playground, playfield and park generally differs across different cities and countries due to the differences in the socio-economic and planning context. Therefore planning standard for recreational facilities for urban areas should be articulated based on cautious examination of planning context.

Each residential area requires a wide range of recreational facilities to ensure proper dwelling environment for people in the locality. Play lot, playground and playfields are recreational facilities that must be designed by the planners to ensure recreational facilities for the community. Gallion and Eisner (1986) suggested following standards for playground of a residential area according to the size of the population, as shown in Table 2.

Table 2: Standards for playground for a residential area according to population

Population	Number of Children	Size in Acres
2000	450	3.25
3000	600	4.0
4000	800	5.0
5000	1000	6.0

Source: Gallion and Eisner, 1986

Playlots are small areas designed for children of pre-school age. According to different international standards, a playground for fewer than 200 children is unviable to function properly whereas more than 1200 children require two or separate playgrounds. The playground should provide an adequate area for informal play. There should be courts for various sports such as soccer, volleyball, badminton, cricket etc. For every thousand population, 0.25-0.5 acre for Playlot, 1.5 acre for playground and 1.5 acre should be dedicated for playfield facility as recommended in 'Time Saver Standard for Site Planning' (Mcgraw-Hill, 1999).

Table 3: Planning Standards for Playlot, Playground, Playfield and Park at USA

1	USA Standard (Acre Per 1000)	Recommend ed size in USA	Maximum distance served /Service Radius	Age Group
Play lot	0.25-0.5	1	1/8 mile	Pre School
Playground	1.5	3	1/2 mile	School going (6- 15)
Playfield	1.5	15	1 mile walking or 1/2 mile riding	Young and Adults (15+ Age Group)
Park	1.25	20	1 mile	All age groups

Source: Khan 2012; Mcgraw-Hill, 1999; APA 1965

National Playing Fields Association (NPFA), founded in 1925, developed the 'British standard' for recreational facilities, with an aim to ensure that every man, woman and child in Great Britain and Northern Ireland would have the chance to participate in outdoor recreational activity within appropriate distance of home during their free hours. The Association suggested every local authorities to implement a minimum standard of provision of 5 acres of public open space for every 1000 people, of which at least 4 acres should be dedicated for team games, tennis and bowls. After inclusion of private playing space and school playing fields in 1934, this standard was increased to 7 acres. In 1938 the 1 acre of open space, initially included for parks and public gardens, was excluded to make the standard of 6 acres for play space only.

In the late 1960s, British Ministry of Housing and Local Government (MHLG) found that play provision of playing fields above 1.5 acres (0.6 ha.) per 1000 population did not produce increased levels of participation. However a demand-based procedure for calculating requirements for playing fields have been suggested by Sports Council of UK by using available participation data and proposed 2.4 acres of playing fields per 1000 population (City of Oxford, 2008).

Different sizes of playground and playfields are available in urban areas of Bangladesh which are under ownership of various organizations and institutions and most of them are not generally open to common people. Only few playgrounds are owned by city corporations, development authorities or municipalities – thereby accessible to common people. Play facility standards were not given proper importance in Master Plans of various cities in Bangladesh in the past.

4. Planning Standards for Playlot, Playground, Playfield and Park: Global Perspectives

There are different set of standards for various types of play facilities – such as playlot, playground and playfield – for different age groups of a community. Following section describes planning standard for different types of playgrounds that are being practiced by various cities and countries across the world regarding planning standards for play facilities.

4.1 Playlot Facility Standards

Playlots are small areas generally designed for children of pre-school age. Playlot or ‘Tot lot for smaller children’ (i.e. toddlers) should be located on smaller area than the playground and nearer to dwelling units for easy supervisions. Several play lot can be developed within any particular development. It is a common practice to include a playlot area as part of a neighborhood playground. Playlot facilities should be simple and safe and include the following: swings (low, regular), slides (low), sand box, mountain climber (low), play sculptures, one or more play houses, open area for free play, a shelter with benches for mothers, space for baby carriages, small wading pool or spray pool, concrete walk and paved area for wheeled toys, and with a low fence around the entire area.

National Recreation Association (NRA) Standard of USA proposes a playlot of 220 – 460 sq-m for a population of 300 – 800 for a service radius of 1/8 mile (i.e., 200 m) or for a residential block. NRA proposes for 50 to 60 sq. ft play space for a child. ‘Time saver standard for site planning’ suggests 1 acre size for a playlot and a standard of 0.25 – 0.5 acre per thousand population for a playlot, which is also supported by Chiara and Lee Koppelman (1975) in "Urban Design and Planning Criteria". American Public Health Association recommends playlot of 150 – 500 sq-m (desired size 350 sq-m) for pre-school children for 75 children or less within 300 to 400 ft of every house and play-space standard of 40 – 50 sq-ft per child.

Table 4: Playlot Facility Standard in Foreign Countries

City/ Country	Category/Type/Source (as appropriate)	Population Coverage	Area in Acres	Other Standards/Radius
USA	National Recreation Association Standard, 1954 (for Active Recreation)	300 to 800	2,400 to 5,000 sq. ft. (220 – 460 m ²) (50 to 60 sq. ft./ Child)	1 block or 1/8 mile
<i>Time saver standard for site planning (McGraw-Hill, 1999)</i>		(0.25-0.5 acre) per 1000	1	1/8 mile
District of Columbia	Play and decorative areas (in Block and street space)	Capacity—60 persons	≤0.60 acre	Service Radius 2 blocks
Joseph De Chiara and Lee Koppelman (1975) in "Urban Design and Planning Criteria"				
	Children's Play Area (with Equipment)	0.5 acre/1000 pop.	1 acre	Playgrounds, Neighborhood Parks, Community Parks, School Playgrounds
Hong Kong	Children's Playground	5000	400m ²	
Bhutan	Children's Playground	1 per 2500-4000	100 sq-m (min)	10 minutes walking from most houses.
South Africa	Neighborhood Playlot	800	0.04—0.1 ha	Radius 0.5 km
England (London)	Local Area for Play		> 0.01 ha (100 sq.m)	1 min travel (100m)
	Local Equipped Area for Play		> 0.04 ha (400 sq.m)	5 min travel (400m)
	Neighbourhood Equipped Area for Play		> 0.1 ha	1000 m (15min)
	Settlement Equipped Area for Play	Often included within large parks		Over 1000 meters
Tanzania	Children Play ground		0.2-0.4 ha	Tanzania
Malaysia (Shah Alam City)	Playground (Children play areas)	500	0.5 acre	1 acre/1000

Source: Compiled by Author (Data Source: APA, 1965; Lancaster, 1990; Planning Department of Hong Kong, n. d.; Putrajaya Local Plan, 2002; Damphu Structure Plan, 2006; PPDC, 2008; Green, 2012)

Hong Kong proposes a standard of 400 sq-m for children's playground for 5 thousand population. South Africa recommends for a playlot of 0.1 – 0.25 acres with a radius of 0.5 km for a population of 800. Shah Alam city of Malaysia proposes children's play area of 0.5 acre for every 5 hundred people whereas London city of England categorized four

types of play areas for children. London city suggests Local Area for Play (without equipments) of more than 100 sq-m within 1 min travel whereas ‘Local Equipped Area for Play’ of more than 400 sq-m within 5 min travel. In addition, it also recommends ‘Neighborhood Equipped Area for Play’ of greater than 1000 sq-m within 1 km as well as ‘Settlement Equipped Area for Play’ situated more than 1 km away from residence which is often included within large parks.

4.2 Playground Facility Standards

The neighborhood playground generally serves the needs of the five to 15 year age group, but may provide limited facilities to the entire neighborhood. Playground is the primary center of outdoor play for children, with partial opportunities for recreation for youths and adults. However, a part of the playground may be designed as a playlot. Playground generally becomes a central area where the community can find recreation and mingle with family, neighbors and friends. Therefore ideally playground should centrally located for easy access of all children within the area or adjacent to other community facilities within the neighborhood area.

Local Planning Administration (LPA) of USA recommends for a playground of 3–7 acres (ideally 5 acre) for a population of 5 – 10 thousand with a service radius of 400 m for high density and 800 m for low density. It also recommends that playground should be located next to an elementary school and also be central in the neighborhood. American Public Health Association recommends for 2.75 acre per thousand population for playground, indicating 2.75 acres size for a population of 1000 to 5000. However Time saver standard for site planning recommends for 3 acres for a playground with a radius of 800 m. District of Columbia indicated a capacity of 264 persons for a ‘Neighborhood Playground’ of 3 – 5 acres with a service radius of 600 m.

“Time Saver Standard for Site Planning” suggests 3 acres for a playground within half mile from residence having a standard of 1.5 acre per thousand population. India recommends for a playground for a secondary school having an area of 4 acres whereas 0.5 acres for primary school playground. South Africa proposes a neighborhood playground of 1 – 2.5 acre with a service radius of 500 m whereas one soccer practice field is suggested for a population of 3 thousand, thereby proposing 24 soccer practice field for a population of 60 thousand (20 for neighborhood and 4 for community). For Malaysia, Kuala Lumpur city proposes 1.2 acre for a playground whereas Putrajaya city proposes 1.5 acre for the same.

Table 5: Playground Facility Standard in Foreign Countries

City/ Country	Category/Type/Source (as appropriate)	Population Coverage	Area in Acres	Other Standards/Radius
USA				
Local Planning Admin.	Playground	3,000—5,000	3—7 (ideal- 5)	High density: 1/4 mile; Low density: 1/2 mile
	<ul style="list-style-type: none"> - All ages but mostly 5-15 years - Next to an elementary school and also be central in the neighborhood 			
American Public Health Association	Playground	1,000 to 5,000 (2.75 acre/1000)	2.75	
	Playgrounds	1.25 acres per 1000 population		
<i>Time saver standard for site planning</i> (Mcgraw-Hill. 1999)		1.5 Acre Per 1000	3	1/2 mile
District of Columbia	Neighborhood playgrounds	Capacity—264 persons	3—5	Radius 3/8 mile
Joseph De Chiara and Lee Koppelman (1975) in "Urban Design and Planning Criteria"				
	Field Play Areas for Young Children	1.5 acres/1000 pop.	3 acres	Playgrounds, Neighborhood Parks, Community Parks
Hong Kong	Football pitch	1 per 100 000		
	Football pitches within sports grounds do not count towards standard due to their inaccessibility to the public.			
India	Playground	Primary School	0.5 acre	
	Playground	Secondary School	1.60 ha	
Bhutan	Local Field Sport facility	1 per 5,000 (0.50 ha per 1000 people)	4—5 acre	
South Africa	Neighborhood Playground	4000	0.4—1 ha	Radius 0.5 km
	Soccer practice field	24 nos. for 60,000 (1 per 3,000)	0.55 ha/ Facility	
City/ Country	Category/Type/Source (as appropriate)	Population Coverage	Area in Acres	Other Standards/Radius
Tanzania	Community Playground		4.0-8.0 ha	
Malaysia (Kuala Lumpur)	Local Play Area	5000	1.2 acre	0.25 acre/1000
Putrajaya	Playground	0.6 sq-m per person	1.5 acre	

Source: Compiled by Author (Data Source: APA, 1965; Lancaster, 1990; Planning Department of Hong Kong, n. d.; Putrajaya Local Plan, 2002; Damphu Structure Plan, 2006; PPDC, 2008; Green, 2012)

Hong Kong city proposes a 'Football Pitch' per one lakh population, however rightly pointed that Football pitches within sports grounds should not be counted in standard due to their inaccessibility to the common people. CSIR policies of South Africa suggests that use of playground facilities of schools by the general public in areas where there are shortages of sport and recreation facilities, may lessen shortages and improve maintenance and management issues. However, in some areas schools themselves do not have their own sporting fields and facilities and hence require access to public playfields. In addition, multi-purpose sports halls and complexes that are adjacent to, close to or are part of school properties, encourage cost and land savings.

4.3 Playfield Facility Standards

Playfield is generally targeted for young people and adults and provides a variety of recreational activities. A single playfields may function for several neighborhoods and the walking distance should not exceed one mile, suggested radius is one-half-mile. American Public Health Association (APHA) recommends a playfield of 20 – 25 acres for a population not more than 20 thousand within 15 to 24 years age and family groups. APHA proposes that playfield will be central for 3 to 5 neighborhoods preferred adjoining a school, having service radius of 1 mile or less from every home that might vary with population density in some cases, however suggests a standard of 1.25 acres per thousand population for playfield (Table 6).

Table 6: Playfield Facility Standard in Foreign Countries

City/ Country	Category/Type/Source (as appropriate)	Population Coverage	Area in Acres	Other Standards/Radius
USA				
American Public Health Association	Playfield	Not more than 20,000	Size: 20—25 acres	15 to 24 years and family groups
		-Central 3 to 5 neighborhoods preferred adjoining a school -Radius: 1 mile or less from every home (varies with pop. Density in some cases)		
	Playfields	1.25 acres per 1000 population		
	Total active recreation	2.5 acres per 1000 population		
	<i>Time saver standard for site planning (Mcgraw-Hill. 1999)</i>	<i>(Acre Per 1000)</i>	<i>Recommended size in USA</i>	<i>Maximum distance served /Service Radius</i>
	Playfield	1.5	15	1 mile walking
Joseph De Chiara and Lee Koppelman (1975) in "Urban Design and Planning Criteria"				
	Older Children- Adult Field Sports Activities	1.5 acres/1000 pop.	15 acres	Playfield, Community Park, District Park
	Tennis-Outdoor Basketball Other Court Sports	1.0 acres/1000 pop.	2 acres	Playfield, Community Park

Source: Compiled by Author

Chiara and Lee Koppelman (1975) in "Urban Design and Planning Criteria" suggests 15 acres for a playfield while India recommends for a playfield of 6 acres in a secondary

school. However Australia proposes for 25 acres for a District Playfield for 15 thousand population.

Table 7: Playfield Facility Standard in Foreign Countries

Country	Category/Type/Source (as appropriate)	Population Coverage	Area in Acres	Other Standards
India	Playfield	Higher Secondary School	2.50 ha	
South Africa	Soccer practice field	24 nos. for 60,000 (1 per 3,000)	0.55 ha per Facility	
		20 no at Neighborhood and 4 no at Community Level (total-24 nos)		
	General Provision	0.56 ha/1000		
		An additional 0.3 ha per 1000 in metropolitan areas for higher order facilities		
	Access Distance	3—10 km for local facility	10—50 km for regional facility	
	Hierarchy of provision	Threshold Population	Area (ha)/1,000	
	Neighborhood	3,000	0.23 ha	
	Community/Sub-district	15,000	0.21 ha	
	District/Sub-regional	60,000	0.12 ha	
	Metro/Regional	1,20,000	0.3—0.4 ha	
Australia	Active Recreation Space	ha/1,000 population	Includes all sporting fields (junior and senior), courts and greens available for public use.	
	Playfield			
	District	15,000	Min. 10.7 hectares	
	Sub-District	5,250	6.1 to 10.7 hectares	
	Local	3,500	Between 2.7 to 6.1 hectares	
	Neighborhood		Less than 2.7 hectares (not a desired space)	
Tanzania	Community Playfield		10.0-20.0 ha	
Malaysia (Shah Alam City)	Playing Field	500	1 acre	2 acre/1000

Source: Compiled by Author

5. Playground Standard for Urban Areas in Bangladesh

5.1 Playground Facilities in Metro City Plans

Most of the metro cities in Bangladesh have not followed any specific planning standard for playgrounds while preparing respective physical plans. Development Plans and Master Plans of metro cities like Dhaka and Chittagong proposed standard for open space per thousand population while ignored the necessity of proposing as well as following those standards in their proposed development plans (Khan, 2016). DMDP for Dhaka city

proposed playground standard as ‘Double usage of primary and secondary school yards’ for its plan while DAP for Dhaka city also ignored playground standard while detail area planning for Dhaka city.

However, as presented in Table 8, Sylhet Master Plan proposed a standard of 2 acres of playfield for every 25,000 population which is quite similar to the proposed standard of ‘Land Development Rules of Private Housing Project-2004’ for Dhaka city.

Table 8: Standard of Playground Facilities at Metro City Plans in Bangladesh

Plans for Metro City	Standard
DMDP	Double usage of primary and secondary school yards
DAP for Dhaka	For a Neighborhood (12,500 people); 2 – 3 playgrounds of 1 acre size each. (0.25 acre play space per thousand.)
Sylhet Master Plan	2 acres of playfield for every 25,000
Private Residential Land Development Rules - 2004 (PRLDR)	<ul style="list-style-type: none"> ○ 2 acres of playfield for every 25,000 ○ (0.08 acre per 1000 population) ○ 1 acre per 10,000

Source: Compiled by Author

With the exception of Rangpur Master Plan, there is no evidence in the physical planning of urban areas in Bangladesh at any level regarding maintaining specific standards for various levels of playgrounds—such as playlot, playground and playfields. Necessity of play and its impact on the development of children and youth was not duly recognized in the past planning efforts in various cities in Bangladesh.

Table 9: Proposed Standard for Playground in Rangpur City Corporation

Facility	Home to Facility Distance (Km)		Area Required (Acre)		Population Served		Remarks
	Desired	Max.	Min	Desired	Min	Desired	
Playlot			0.1	0.16	200	500	• Right beside residence
Play Ground for young	0.25	0.5	1.5	2.5	3000	5000	• May not be required so frequently where adequate School field is provided
Play Field for adult/Eidgah	-	-	3.25	5.0	-	-	<ul style="list-style-type: none"> • 1 per block • Have to accommodate a standard cricket field

Source: Rangpur Master Plan (Draft), 2014.

5.2 Playground Facilities in Paurashava Plans

Upazila and Paurashava Master Plans of nineties – prepared by LGED and UDD recommended for playground standard of 3 acres per 20,000 population. District Town Infrastructure Development Project (DTIDP) conducted by LGED for preparation of Master Plans for ‘A Category’ Paurashava proposed 2 acre per 25,000 Population and recommended maximum walking distance of 1.5 km (Table 10). However, Upazila Town Infrastructure Development Project (UTIDP) carried out also by LGED for preparation of Master Plans for ‘B and C Category’ Paurashava proposed 3 acre per 20,000 population.

Table 10: Standard of Playground Facilities at Municipalities in Bangladesh

Plans for Paurashava	Types	Standard
Paurashava Plans of Nineties by UDD (for Playground/Stadium)		3.00 acres/20,000 pop.
Paurashava Plans of Nineties by LGED (for Playground/Stadium)		3.00 acres/20,000 pop.
District Town Infrastructure Development Project (DTIDP)	Playground	2 acre per 25,000 Population; maximum walking distance 1.5 km
	Stadium/sports complex	5 acre per 50,000 Population
Upazila Town Infrastructure Development Project (UTIDP)	Playground	3.00 acres/20,000 population
	Stadium/sports complex	5 – 10 acres/Upazila HQ

Source: Compiled by Author

6.0 Existing Provision of Playground Facilities at Metro Cities in Bangladesh

6.1 Playground Facilities at Metro Cities

Playgrounds that are accessible for common people are quite few in numbers in major urban areas of the country. Most of the playgrounds, currently available in the metro areas of Bangladesh are presently under the ownership of various institutions – mostly belongs to various educational institutions. If the case of Dhaka city is considered for instance, there were 148 playgrounds in the city area with an area of 235 acres though only 26 playgrounds are public playgrounds which are theoretically accessible for common people and owned by city corporations or public works department or other government institutions (Ahmed, 2000). However among these public playgrounds, some fields are illegally occupied by sports club or influential groups of people, thereby limiting the accessibility of common people to these grounds as well (BIP, 2018). Hence, if we consider only the numbers of playgrounds for Dhaka city, the average population coverage of a playground in Dhaka city is 44 thousand whereas it will drastically altered to 346 thousand population coverage when considering the public playgrounds only which are accessible to common people. The average size of playgrounds in Dhaka city stands at 1.6 acres.

Table 11: Provision of Playground Facilities at Metro Cities in Bangladesh

City	Playground	Area	Thou/Fac	Acre/Thou
Dhaka	148	235	44	0.04
Dhaka (accessible to common people)	26	39	346	0.004
Dhaka South City Corporation	9 (under city corporation)	21	356	0.007
Dhaka North City Corporation	15 (under city corporation)		40 (under all public and private organizations)	
Chittagong	59	38	44	0.01
Chittagong (above 0.5 acres)	25			
City	Playground	Area	Thou/Fac	Acre/Thou
Rajshahi	13	20	35	0.04
Khulna	24	36	31	0.05
Sylhet	18	27	27	0.06
Barishal	16	24	21	0.07
Total	251	379	44	0.03

Source: Analyzed by Author; (Data Source: District Statistics of BBS, 2011; Latest Development Plan, Structure Plan, Master Plan and Detail Area Plans of the relevant Cities; RAJUK, 1995; RAJUK, 2014; RDP, 2015; RMDP, 2004; RMP (Draft), 2014; DAP, 2010.)

Among the other metro cities in Bangladesh, Chittagong city have highest number of playgrounds (59) with 44 thousand population per every playground. However, Barishal city is in better situation in terms of population coverage (21 thousand per each playground) followed by Sylhet (27) and Khulna (31), as depicted in Table 11. It is quite noteworthy that there is direct relationship between size of the city and population coverage per facility – signifying that large cities have greater inadequacy of playgrounds than the smaller metro cities in Bangladesh. As a whole, for metropolitan cities in Bangladesh 0.03 acre land is only available for playgrounds per thousand population and each playground serves 44 thousand of population on average though if we consider opportunity for common people having access into these playgrounds, these figure will be much worse in reality.

6.2 Playground Facilities at Paurashavas in Bangladesh

Playgrounds accessible for common people are quite inadequate in the Paurashava areas in Bangladesh and like the metro cities, most of the playgrounds under the ownership and supervision of various institutions, thereby barring the accessibility of common people into these grounds.

Playground Facilities in ‘A’ Category Paurashavas

For the case of ‘A’ category municipalities those are studied in this research, only 0.02 acres are available per thousand population for outdoor play facilities, as revealed in Table 12. Therefore due to the current shortage of play areas in municipalities, aggregately 18 playgrounds with an average area of 1.18 acres have been proposed for Jhenaidah, Gopalganj and Bhairab Paurashavas in respective Master Plans.

Table 12: Provision of Playground Facilities in ‘A’ Category Paurashavas

Municipality	Present		Proposed			Future	
	Area	Acre/Thou	Number	Area	Acre/Fac	Area	Acre/Thou
A Cat Paurashava							
Jhenaidah	2.28	0.02	6	8.9	1.48	11.18	0.07
Gopalganj	2.74	0.04	5	7.22	1.44	9.96	0.07
Bhairab			7	5.2	0.74		
Savar	4.5	0.03					
Total	9.52	0.02	18	21.32	1.18		0.07

Source: Analyzed by Author (Data from Master Plans of Respective Municipalities)

Playground Standards in ‘B’ Category Paurashavas

Analysis of the Master Plans of B category Paurashavas reveals that playground area of 0.09 acres is available per thousand population at present. On an average, 1.13 acres area has been proposed for a playground in the proposed Master Plans whereas 5.97 acres land has been proposed for a stadium facility in B category Paurashavas (Table 13).

Table 13: Provision of Playground Facilities in ‘B’ Category Paurashavas

Name	Present		Proposed Playground			Proposed Stadium		
	Acre	Acre/Thou	No	Acre	Acre/Fac	No	Acre	Acre/Fac
Paurashava								
Daudkandi	5.84	0.13	10	9.09	0.91	1	8.37	8.37
Bajitpur	0	0.00	3	5.54	1.85	1	3.57	3.57
Pirganj	4.28	0.14						
Total	10.12	0.09	13	14.63	1.13	2	11.94	5.97

Source: Analyzed by Author (Data from Master Plans of Respective Municipalities)

Playground Standards in ‘C’ Category Paurashavas

Analysis of the Master Plans of C category Paurashavas reveals that Master Plan of Kasba Paurashava proposes 6 playgrounds with an area of 5.37 acres and Nageswari Paurashava proposes 9 playgrounds with an area of 12 acres which has been presented in Table 14. Therefore 1.16 acre land has been proposed in the Master Plans for each playground on average.

Table 14: Standard of Proposed Playground in Master Plan of ‘C Category Paurashava’

Municipality	Proposed		
C Cat Paurashava	Number	Area	Acre/Fac
Kasba	6	5.37	0.9
Melandaha	0		0
Nageswari	9	12	1.33
Total	15	17.37	1.16

Source: Analyzed by Author (Data from Master Plans of Respective Municipalities)

6.3 Playground Standard in Proposed Master Plan for Paurashava under DTIDP and UTIDP

Playgrounds, proposed in DTIDP and UTIDP plans have not been categorized in various types like playlot, playfield and playgrounds – therefore it can be said that play opportunities for varying age categories have not been recognized in these masters plans. It has been found from the analysis of Master Plans of studied Paurashavas from A, B and C categories, 60.2 acres area has been proposed for 46 playgrounds with an average 1.16 acres of area per playground, as shown in Table 15.

Table 15: Playground Standard in Proposed Master Plan for Paurashava under DTIDP and UTIDP

Name	Playground – Proposed		
Paurashava	No	Acre	Acre/Fac
A Category	18	21.32	1.18
B Category	13	14.63	1.13
C Category	15	17.37	1.16
Total	46	53.32	1.16

Source: Analyzed by Author (Data from Master Plans of Respective Municipalities)

7. Recommended Standard for Sports and Play Facilities for Urban Areas in Bangladesh

Participation of people in play and sport activities generally increases if proper play facilities are appropriately provided within the neighborhoods. Khan and Kalam (2015) finds that 37 percent of people aged between 12 – 25 years old are willing to participate in sports at least once in a week among whom 16 percent wishes to play for more than once in a week if proper facilities are provided to them. Considering the planning standards of playgrounds, observed from global practices as well as various findings from this research, following standards for sports and play facilities are recommended for urban areas in Bangladesh.

Standard for Playlot

Six percent of population belongs to the age group 3 – 5 years in Bangladesh, therefore for a population of 5 thousand; there are 300 children available on average. As a result, if 25 percent of children (i.e. one in four) want to enjoy Playlot facility on a given day, there should be facility available for 75 children.

Hence Playlot area of 400 – 800 sq-m is recommended for high density urban areas in Bangladesh for a population of 3,000 – 5,000 for service radius of 0.3 – 0.5 km. In addition, for low density areas, 0.25 – 0.5 acres for a Playlot is recommended for 1500 – 3000 people in an urban area.

Standard for Playground

Twenty percent of population belongs to the age group of 6 – 14 years in Bangladesh, therefore for a population of 10 thousand; there are 2000 person available on average in this group. As a result, if 20 percent of this age group desires to enjoy playground facility on a given day, there should be playground facility available for 400 persons.

In this regard, 1 – 1.5 acres is recommended for a playground facility for 5 to 10 thousand people in low density urban areas for a service radius of 0.5 – 1 km or for a neighborhood. For high density urban areas, threshold population of 15 to 20 thousand is suggested for urban areas in Bangladesh.

Standard for Playfield

Twenty percent of population belongs to the age group 15 – 24 years in Bangladesh, therefore for a population of 20 thousand; there are 4000 person available on average in this group. As a result, if 20 percent of this age group wish for enjoys playfield facility on a particular day, there should be playfield facility available for 800 persons.

Hence 2–3 acres is recommended for a playfield facility for 20 to 25 thousand people in low density urban areas for a service radius of 1–1.5 km or for a community. However threshold population of 30 to 40 thousand is suggested for high density urban areas in Bangladesh.

Standard for Sports Center

Sport Center facilities should be developed in urban areas in Bangladesh for making provision for active recreational facilities which might be provided by private sectors. Standard for these facilities are not provided in various Master Plans or development plans in Bangladesh, however various countries do have the standards for this type of facilities as well as they provide recreation centers for active recreation for their urban people.

Sports centre may be developed (mainly by private sector) in high density urban areas, and land areas should be reserved for this types of facilities in the Master Plan. Young and adults can access these facilities even in the evening or at night hours, however as these facilities are developed by private sector, some sort of payments have to be made by the users for availing this facilities, therefore space of these facilities should not be included in regular space for active recreational use for people as these types of facilities are not common facilities open for all.

In this backdrop, Sport Centre facility of 1 – 2 acres is recommended for high density urban areas for 75 thousand to 1 lakh population (Table 16). For low density urban areas in Bangladesh, sports centre facility is suggested for 50 to 65 thousand population. These types of facilities will lessen the pressure on other active recreation spaces such as playfields or playgrounds and certainly help to increase the opportunity for active recreation for urban people who are otherwise unable to access recreational facilities.

Table 16: Recommend Standard for ‘Sports and Play’ Facilities in Bangladesh

Types	Type of Urban Area	Population Threshold	User Threshold	Area	Service Radius	Age Group (User Percent)
Playlot	Low Density	1,500 – 3,000	75 children or less	0.25 – 0.5 acre	0.3 – 0.5 km	3 – 5 years (6%)
	High Density	3,000 – 5,000	[5000 x 0.06 = 300; 300x 0.25 = 75]	400 – 800 sq-m	Neighborhood	
	Where outdoor space are not possible to provide, indoor space should be provided					
Playground	Low Density	5,000 – 10,000	400	1 – 1.5	0.5 – 1 km	6 – 14 years (20%)
	High Density	15,000 – 20,000	[10,000 x 0.2 = 2000; 2000x0.2 = 400]	1 – 1.5	Neighborhood	
Playfield	Low Density	20,000 – 25,000	800	2 – 3 acre	1 – 1.5 km	15 – 24 years (20%)
	High Density	30,000 – 40,000	[20,000 x 0.2 = 4000; 4000 x 0.2 = 800]	2 – 3 acre	Community	Maximizing use of facility
Sports Centre	Low Density	50,000 – 65,000		1 – 2 acre		Private Facility
	High Density	75,000 – 1 lakh;		1 – 2 acre	High density urban areas	Private Facility

Source: Developed by Author

8. Concluding Remarks

Most of the metro cities in Bangladesh have not followed any specific standard for planning for playgrounds while preparing their respective physical plans. Development Plan and Master Plan of metro cities like Dhaka and Chittagong proposed standard for open space per thousand population while ignored the necessity of following those standards in their proposed development plans. With the exception of Rangpur Master Plan, there is no evidence in the physical planning of urban areas in Bangladesh at any level regarding maintaining specific standards for various levels of playgrounds—such as playlot, playground and playfield. Necessity of play and its impact on the development of children and youth was not duly recognized in the past planning efforts in various cities in Bangladesh.

Playgrounds that are accessible for common people are quite few in numbers in major urban areas of the country. Most of the playgrounds, currently available in the metro areas of Bangladesh are presently under the ownership of various institutions—mostly belongs to various educational institutions. Only few playgrounds are owned by city corporations, development authorities or municipalities – that are accessible to common people. Playgrounds accessible for common people are quite inadequate also in the Paurashavas in Bangladesh. Like the metro cities, most of the playgrounds under the ownership and supervision of various institutions, thereby barring the accessibility of common people into these grounds.

This study suggests various standards for sports and play facilities for urban areas in Bangladesh which could be a guideline for planners and policy makers while planning for various cities in Bangladesh. Respective development authorities, city corporations or municipalities should develop their play facilities by following proper planning standards in respective urban areas for planned and sustainable development of the cities.

Acknowledgement

This research has been funded by Ministry of Science and Information & Communication Technology’ of Government of Bangladesh under Bangabandhu Fellowship of Science and ICT.

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