Sustainable Quality of Life of Urban Slum Dwellers in Bangladesh: Evidence from Dhaka City

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Abstract

Bangladesh has a track record of reducing poverty by half in last two decades. With an impressive economic growth the country is rapidly urbanizing and the in-migration to urban areas gives rise to a large number of slums and squatter settlements, and poverty rates in these settlements are three times the urban average throughout Bangladesh (World Bank, 2019). This growing numbers of slum dwellings, worsening the social standard and environment quality and putting pressure on urban services and infrastructure. In line with the SDG-11 for a sustainable urban development, this study examines the sustainable quality of life of the slum dwellers in Bangladesh. The empirical study used both qualitative and quantitative data collected from randomly selected 387 slum households from three large slums in capital city Dhaka. Based on Stiglitz-Sen-Fitoussi multidimensional approach, eight profiles have been developed incorporating both subjective and objective indicators of sustainable quality of life.

The results reveal that the livelihood that slum dwellers are leading, are impeding to sustainable development in urban areas. Their crowded and unhealthy housing profile, unnourished and poor health profile and venerable security profile, especially unsafe social and environmental conditions, indicates diversity of sustainable quality of life in the slums. Therefore, to achieve the sustainable development of cities and communities, the findings suggest that policy makers should address the sufferings of the growing informal settlements that left excluded from economic and social benefits of urbanization.

Keywords: Quality of Life, Slum Dweller, Sustainability, Bangladesh
JEL Classification Code: R10, R20, R58

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1. Introduction

Economic growth leads to rapid urbanization. Urbanization is the proportionate increase in the urban population with respect to the total population (Ray 2017). The United Nations (2014) report shows that developing regions have been witnessing a faster rate of urbanization than that experienced by the developed regions. In 2018, 4.2 billion people, 55 percent of the world's population, lived in cities. If the growth led urbanization is properly managed that can fuel further growth. But in most of the African and Asian countries urbanization was never a result of a strong base of cities; rather it was distress and poverty in rural areas that resulted in a huge influx of rural migrants into urban areas. Thus rapid urbanization leads to the expansion of informal settlements or slums which are not well managed. According to UN-Habitat (2015), approximately 30% of urban inhabitants in developing countries lived in slum settlements in 2014 and the absolute number of slum dwellers continues to increase. Most of the countries are unable to accommodate this surge in decent living conditions (Turok, Budlender & Visagie, 2017).

Like most developing Asian countries, Bangladesh is urbanizing rapidly in terms of resident population and urban agglomeration has doubled in capital city Dhaka between 1995 (8.33 million) to 2015 (17.6 million) and is forecasted to be triple by 2025 (24.33 million). (UN-Habitat, 2016). According to United Nations (2014) it is expected that the share of urban population will be more than 50% by 2050 from current 32.9%. Bangladesh's notable growth and development in recent years pursues people to migrate from rural to urban areas, since living in a city gives people greater hope and optimism than in the countryside because of all the opportunities and amenities (CDE, 2014). Despite the rapid economic growth, 55.1% of the urban population are still living in slum and slum population has increased from 19.99 million in 1990 to 29.27 million in 2014 (UN-Habitat, 2016). Poor environmental conditions and deprived infrastructures within the slums induce negative impacts on the physical and psychological well-being of urban slum dwellers (Gruebner, 2014).

To move forward in line with Goal-11: Sustainable Cities and Communities of Sustainable Development Goals (SDGs) countries, for her people, need to ensure access to safe and affordable housing, and upgrading slum settlements. Sustainable existence of its people is a component of sustainable development and is related to the quality of life in a population or community – whether the economic, social and environmental systems that make up the community are providing a healthy, productive, meaningful life for all community residents, present and future (LinusWealth, 2018). Since a huge volume of people living in slums, limited knowledge about slum settlement size, distribution, and dynamics presents an enormous challenge for urban health (Sclar, 2005). Most of the studies (Alamgir, Jabbar & Islam, 2009; Hossain, Moniruzzaman & Islam, 2010; Kamruzzaman & Hakim, 2016 and Uddin, 2018) conducted on slum dwellers of different metropolitan cities of Bangladesh including capital city, Dhaka have assessed the socio-economic status and livelihood of the slum dwellers, focusing mainly on objective measures like age structure, education, occupation and income status, housing quality and partially on access to civic facilities. Ahmed, M., Alam, J.B. & Ahmed, A.A.M (2010); Hossain, M. A., Moniruzzaman, M. & Islam M.A. (2010) and Uddin, N. (2018) in addition assessed the environmental services and environmental health status of the slum dwellers in different metropolitan cities of Bangladesh. It is imperative to do a study on the quality of life (QoL) of urban slum dwellers, based on both objective and subjective indicators, which this paper aims to, not only for sustainable development in developing countries but also for global sustainability.

Therefore, the purpose of the study is to examine status of sustainable quality of life of urban slum dwellers of Bangladesh and find the way toward achieving SDG-11: Sustainable Cities and Communities, taking evidence from capital city, Dhaka.

2. Conceptual Framework for Measuring Sustainable Quality of Life

There are two conflicting schools of thought in measuring individual quality of life - the Scandinavian approach and the American approach. Scandinavian approach (Erikson 1974, 1993) where quality of life are measured with objective indicators of the standard of living; and the American approach (Campbell et al. 1976; Diener 1984; Diener et al. 1999) where quality of life is conceptualized and operationalized through the subjective well-being of individuals. In measuring quality of life, the common view is to use a combination of both objective and subjective indicators. To describe both the subjective and objective conditions of quality of life a range of factors has been identified from different areas of life, such as income and material living conditions, health, education, employment, family and social relationships, civic participation, security, state of the environment, etc. (Rapley 2003).

UN- Habitat (2002a) defines a slum household as one or a group of individuals living under the same roof in an urban area and lacking one or more of the following five amenities: (1) durable housing, (2) sufficient living area, (3) access to clean water, (4) access to improved sanitation, and (5) secure tenure. It is assume, that the overall quality of life of slums dwellers is low, it does not necessarily have to be the truth (Biswas-Diener & Diener, 2001). To help future intervention plans for slum by government, it is important to identify the areas of quality of life with poor level (or lowest scores) of the urban slum dwellers. Since a large number of varying measurements used by different researcher focusing on different aspects in quality of life literature and Gill and Feinstein (1994) finds lack of clarity or consistency about the meaning and measurement of quality of life. Therefore, this study in analyzing the quality of life (QoL) of urban slum dwellers relies mostly on Stiglitz-Sen-Fitoussi (2009) proposed dimensions of quality of life measurements[4], following Nimmerfeldt (2013), Subasinghe (2015) and Uddin (2018).

3. Materials and Method

The purpose of the study is to examine the sustainable quality of life of urban slum dwellers of Bangladesh. Identification of slums by their characteristics can only be made available from primary sources. To depict the urban scenario of the country, the primary data have been collected from the capital of Bangladesh, Dhaka, which is the second fastest growing megacity in the world (United Nations, 2014). The population of Dhaka increases by half a million each year, a rate that would result in a population of almost 24.33 million by 2025 (UN-Habitat 2016). According to the Slum Census Report of 2014, 28.89 percent of total population in Dhaka City Corporation is living in slum, among them, 22.29 percent in Dhaka North City Corporation (DNCC), and 6.60 percent in Dhaka South City Corporation (DSCC). There are 1,644 slums with 135,340 households and 499,011 population under Dhaka North City Corporation (DNCC) and 1,755 slums with 40,591 households and 147,056 population in Dhaka South City Corporation (DSCC). Out of 3,399 slums in Dhaka city, 237 are big slum (100 or more households).

[4] Stiglitz-Sen-Fitoussi (2009) proposed eight dimensions of quality of life measurements are - material living standards (income, consumption and wealth); health; education; personal activities (work and other main activities); political voice and governance; social connections and relationships; environment; security.

Table 1 Profiles, and Indicators of Sustainable Quality of Life of Slums

Profile	Indicators
Household Profile	Sex, Marital Status and Family Size
Housing Profile	Housing structures; types of dwelling and length of settlement.
Work, Income and Wealth Profile	Types of work, monthly Income, wealth and savings position and Job uncertainty
Consumption Profile	Consumption and Consumption expenditure pattern, and nutrient intake
Education Profile	Schooling and literacy level
Health Profile	Health condition, Health expenditure and access to medical facilities
Access to Facilities Profile	Access to clean water, sanitation, electricity and cooking facilities
Security Profile	Economic, Social and Environmental insecurity

For this study, three big slums area (Rail Line slums from T.T.para to Malibag from DSCC and Korail slum and Begunbari slum from DNCC) were selected purposively, as big slum reflects the scenarios better and are convenient for the Field Workers (travel time, security, etc.) to collect data. The sample households were selected randomly and a sample size of 387 has been determined using Cochran formula which is considered appropriate in situations with large populations. Both qualitative and quantitative data were collected using a structured questionnaire from the household heads or in absence of head the second-significant member of the family was interviewed. The interviews were taken in March-April 2019. Based on Stiglitz-Sen-Fitoussi (2009) multidimensional approach eight profiles have been developed incorporating both subjective and objective indicators of sustainable quality of life (Table-1).

4. Findings and Discussion

A common property of slum household is migration, migration from rural to urban areas. The absence of landownership, or unproductive land ownership, river erosion, lack of rural employment pushed this rural labor out from their home areas to urban, mostly to capital city. The study finds that two-third (67.4%) households migrated to Dhaka city from their home area due to employment in their home area and among the rest one-third 17.8% migrated because of landlessness and 10.1% losing shelter due to land erosion by river or other natural causes.

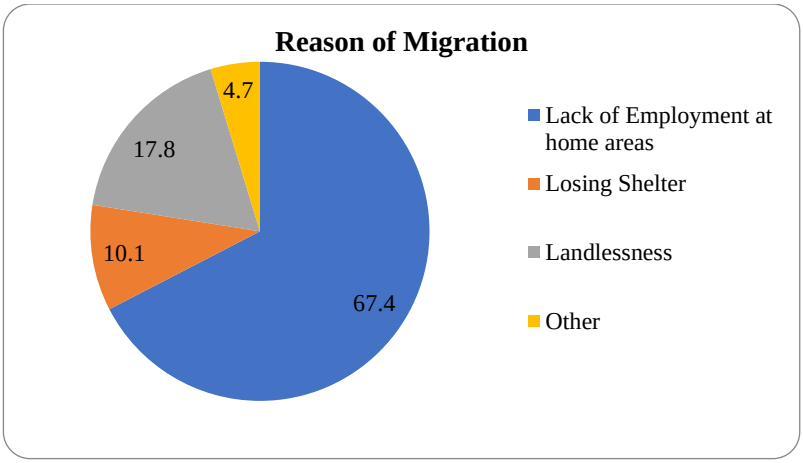

Figure 1: Reason of Migration of Slum Dwellers to Dhaka City

4.1 Household Profile

The gender composition of the family heads shows that most of families were becoming female headed as their husbands who functioned as breadwinners had been left them or died. In some families husband does not have regular work or lazy to work and spends time gossiping in surrounding crowd (locally called *Adda*); and women works as maid servant at different apartments. Table-2 shows that more than fifty percent family heads are female. It also shows that 65.6% household heads are married and 25.4% are separated, divorced or widow. Among the surveyed households 9% are unmarried who lives in slums to work mostly to garments factory or working as day labour or *Riksha puller* to support their family living at home areas.

Among the married heads significant numbers have stable marriages. Besides, stable marriages second marriage families are another important characteristic of the surveyed households. Multiple marriages raise the family size as couple takes children in the successive marriage, though they would have children from earlier marriage. Stable marriage often helps to control their children as good way, where as multiple marriages, especially mother's second marriage, spoils children in many cases.

Another characteristic of the household is its size. Most of the (48.57%) families are big family with five or more family members and only 11.11% household with two member family. Among the slum dwellers 40.31% family are ideal size family with 3-4 members. This scenario is better than the national average household size of 5.19 persons in 2000 and 4.53 persons in 2010 (BBS, 2000, 2015). This improvement is a result of women participation in work; and partially empowered them heading family and decision taking about child carrying.

Table 2: Gender Composition and Marital Status of Family Heads in Slums

	No. of HH Heads	Percentage
Gender:		
Male	180	46.5
Female	207	53.5
Marital Status:		
Unmarried	35	9.0
Married (stable or second marriage)	254	65.6
Separated / Divorcee	78	20.2
Widow	20	5.2

4.2 Housing Profile

In developing countries like Bangladesh, the need for affordable housing for marginalized community has led to the creation of slums. Access to standard housing includes both durable dwellings with permanent structure and sufficient living area (Uddin, 2018). By sufficient living area for the household members in a dwelling, UN-Habitat (2002b) mean, if there are fewer than four people per habitable room.

Mainly four types of dwellings are observed in slums of Dhaka city (Table-3) – (i) *Jhupri* - made with makeshift low shacks like polythene papers or synthetic cloths; or bamboo stick walls and thatch roof. Different variety of this dwelling are also locally called *tong* and *chai*. (ii) *Tin-shed* - shanty house, walls and roof constructed with tin. (iii) *Semi-pucca* houses constructed with brick walls and tin-shaded roof. (iv) *Pucca* house – building or dilapidated buildings. First three types of the houses are mostly tinny by nature and dilapidated buildings in the fourth types are also same in nature. The study finds that most (48.1%) of the houses in slums are *Tin-shed* followed by 25.8% *Semi-pucca* houses. About one-fourth (24.8%) housed in slums are found *Jhupri* and only 1.3% are *Pucca* house. Most of the *Jhupri* are constructed by the habitats on abandoned land or government land along railway-tracks. Other three types of dwellings are rented-house constructed by land owners or beneficiaries on abandoned land or government land.

In terms of length of their settlements in slums two extreme cases are found. Households living in slum longer than 20 years accounts 39% followed by 29.2% households living for 5 years or less. It means flow of new households is still on and at the same time some families are staying in slums for generations. The cause of living longer in the same slum area is due to their work convenience, work place nearby locations. This also creates influence of the members of the households in surrounding area and would involve in crimes.

Table 3 Types of Slum Dwellings and Length of Settlement

Type of Dwellings:	**No. of HHs**	**Percentage**
Jhupry	96	24.8
Tin-shed	186	48.1
Semi-pacca	100	25.8
Pacca	5	1.3
Length of Settlement in Slum:		
Less than 6 years	113	29.2
6 – 10 years	53	13.7
11-20 years	70	18.1
More than 20 years	151	39

Table4 presents the percentage of with different household size living in different size of dwellings. It shows that 84.75% cases all of the members in a family stay in single room houses with limited space and among them 62.27% are having 4 or more members. These families are over crowed dwellers where quarrels are frequent and confusion abounds. As a result these families look disorganized, broken and deserted, having little or no control over its members (Subasinghe, 2015).

Table 4 Habitable Space in Slum Dwellings (percent)

Family Member	Dwelling Size			
	Single Room	Double Room	Three Room	Total
2 members	11.11	-	-	11.11
3 members	11.37	1.81	-	13.18
4 members	23.26	3.62	0.26	27.13
5 members	20.93	3.36	0.78	25.06
5 > members	18.09	4.13	1.29	23.51
Total	84.75	12.92	2.33	100

Among the slum dwellers 12.91% families live in double room houses and mostly having family member of 4 or more. Only 2.33% families are living in three room houses, mostly family with 5 or more member and lives in *Tin-shed* and *Semi-pucca* houses.

4.3 Work, Income and Wealth Profile

For survival people need income and employment. Survival and sustainability is related to man's opportunity and ability to produce and consume. People living in slum straggle for income, many of them do not have regular work and income. They lack work opportunities - due to weather, political crisis or availability of works and inability to work for illness or doing all types of works. Differential opportunity and ability leads to differential income and wealth position.

Uddin (2018) investigated on occupational structure and income of slum dwellers in a study on the second largest city of Bangladesh, Chittagong and found that most of the employed sections in slum areas are engaged with low grade jobs in informal sectors and do trivial works due to the dearth of employment opportunities. Major occupations of household head among slum dwellers are *Riksha* Puller, maid/ home servant, garments worker, day labor, *Hawker* and small businessman which covers more than 75% of the employment and only a few are service holder. Current study also find similar scenario as the socio-economic structure of these two big cities and characteristics of the marginalized people are similar, except the higher nominal income of the household head of slum dwellers in Dhaka city. The cause might be the wage differential between these two cities or wage changes between two studies. This study (Table-5) found that 29.7% household head of slum dwellers in Dhaka city has month income of less than BDT. 4,000 and 4.4% does not have any income, may be due to no job during the interview or are students and does not have any specific job. Highest income (more than Tk.12,000) mostly by *Riksha* Pullers, Drivers (private car, CNG) and job holders, followed by garments workers and few maid servants (Tk. 8,000–Tk. 12,000). Household heads who do not have any job or income (4.4%) lead their lives on begging or borrowings.

Table 5 Income and Asset of Households in Slums

	No. of HHs	Percentage
Income (Monthly):		
Less than Tk.4,000	115	29.7
Tk. 4,000 – Tk. 8,000	94	24.3
Tk. 8,000 – Tk. 12,000	90	23.3
More than Tk.12,000	71	18.3
No Income	17	4.4
Asset & Liability:		
No Asset	226	58.4
Durable Household Appliances	9	2.3
Saving	47	12.1
Property in Home area	60	15.5
Liability (Loan)	45	11.6

Table-5 also presents the asset-liability position of the households. It shows that 58.4% households in slums does not have any asset, rather 11.6% has loan liability. Only 12.1% households have cash savings and 15.5% has family property in home area.

Since slum dwellers employed are mostly involved with informal and trivial works, their employment and income is irregular. Therefore, current study in addition, investigates the causes of irregular employment and their frequency of work /job do. Since most of the households do not have saving or other wealth and nature of jobs they do allow them only to 'earn daily, feed daily' or in other words 'hand to mouth existence'. Therefore, to lead a good life, they are to work daily or regularly. But most of them do not have job certainty, except 20.16% household head of slum dwellers (Table-6). Among them one-fourth can manage work less than 5 days and the other days they are to strive. Among the household head of slums 77.05 suffers from job/ work uncertainty. The main cause of job uncertainty identified is the lack of jobs / works to do (47.8%) and second cause is illness of the family heads (20.93%).

Table 6 Work Day and Causes of Job Uncertainty (percent)

		Working day in a week					
		Daily	6 Days	5 Days	< 5 Days	No Job	Total
Causes of Uncertain Employment	Lack of Job	-	24.55	9.30	13.18	0.78	47.80
	Illness	-	8.01	3.62	7.75	1.55	20.93
	Other Causes	-	1.29	2.07	3.62	2.07	9.04
	No Uncertainty	17.83	2.58	1.04	0.78	-	22.23
	Total	17.83	36.43	16.02	25.32	4.39	100

4.4 Consumption Profile

The study examined the consumption expenditure of household living in slums under three main heads – Food expenditure, non-food expenditure and housing expenditure. The study estimated the average housing expenditure of slum dwellers in Dhaka city to Tk.1,052. Those who are living in *Jhupri* usually do not pay rent. Those who pays rent, their average housing expenditure (rent) is Tk.3,000 per month, starting from Tk.500 to Tk.8,000 per month. Average food expenditure is Tk.7,348 (74% of total HH expenditure), whereas average non-food expenditure is estimated to Tk.1,555

To assess the nutrient of their food consumption, statistics of households' weekly protein intake (Table-7) shows that, about 40% household could not take meat weekly and 50.13% do not take milk and those who takes they take milk they takes once or twice weekly. The protein that is in their weekly menu is fish. It also reveals that fish intake of household is almost consistent, though amount of protein intake varies from family to family.

Table 7 Weekly (times) Protein Intake by Households (Percent)

Protein Item	**Consumption days in weekly**			
	Not weekly	1 - 2	3 - 4	5 - 7
Meat	39.79	55.81	3.36	1.03
Milk	50.13	46.77	2.07	1.03
Fish	13.7	28.2	29.7	28.4

4.5 Education Profile

As per Census of Slum 2014 (BBS, 2015) the literacy rate in the slum is low in comparison to national average, although urban literacy rate is quite high as compared to nation average. It is evident from Table-8 that almost all of the household head of slums in Dhaka are under SSC (97.77%) and about 69% having no schooling and 63.05% cannot even read or write. This low rate of literacy in slums areas are due to their poor economic and weak cultural position. To build a better generation children of these slums should bring in "education for all" program of the government and NGOs also required adopting strategies that motivate them to come to education programs.

Table 8 Level of Education and Literacy (Percent)

Level of Schooling	**Level of Literacy**			
	Can Read only	Can Read and Write	No Literacy	Total
No Schooling	2.84	3.10	63.05	68.99
Primary	2.58	14.99	-	17.57
Secondary	-	11.11	-	11.11
SSC or Above	-	2.33	-	2.33
Total	5.43	31.52	63.05	100

4.6 Health Profile

Economic insolvency and illiteracy makes man apathy about disease and health. Poverty is a major cause of ill health and 'biggest barrier' to accessing health care that the slum community faces (World Bank, 2015). Poverty affects health through poor nutrition, environmental degradation, illiteracy, harmful lifestyle, social exclusion, and lack of access to healthcare (Dahlgren and Whitehead 1992). In turn, ill-health keeps poor people poor (World Bank, 1993). This section tries to explore the health seeking behaviour and the disease burden on low-income households, living slums.

Table-9 presents that the disease burden of the household. It shows that more than three-fourth (75.19%) families living in slums face illness of any member of the household at least once quarterly and about one-fifth families face bi-monthly. Only one-fourth (24.81%) family faces its member illness rare. This high frequency of illness of family members living in slums in Dhaka put a huge burden on household. The most unfortunate aspect of this burden is the fact that a large number of illnesses and compromised health situations that people find themselves in are because of infections that can be prevented simply and effectively (Mannan, 2017). But they are not aware of prevention and are apathy

about nutrition and vaccination.

Table 9 Frequency of Family member getting sick and Average Household Expenditure for Health Care Services

	No. of HHs	**Percentage**
Frequency of Getting Sick:		
Rarely get ill	96	24.81
Less than 4 times a year	119	30.75
4 – 6 times a year	98	25.32
More than 6 times a year	74	19.12
Average Monthly Health Care Expenditure:		
Up to Tk. 500	119	30.7
Tk. 501- Tk. 1,000	161	41.6
Above Tk. 1,000	102	26.4
No monthly Expenditure	5	1.3
Total	387	100.0

There is lack of primary health care services in these slums and squatters. Though health care service providers are available in near distant of most slums in Dhaka city, but majority of slum dwellers have limited access to health care services. There are mainly four types of health care service providers in urban areas in Bangladesh - public hospitals, community clinics, private hospitals, private practitioners and local quack (or *Kabiraj*). In response to question regarding health services slum dwellers receive, it is found that majority dwellers (41.60%) go to government hospitals (Table-10). In Dhaka city, now a day quack or *Kabiraj* are not seen much and slum residents get accustomed to take health advice from the pharmacy attendants and 23.51% takes advice from as it does not cost anything except buying medicine.

Table-10 also reveals level of satisfaction of the slum dwellers towards health service receive from different service providers. It shows that about one-fourth dwellers expressed their high satisfaction in favor of government hospitals' service, followed by private practitioners (13.10%), while it is lowest to private hospitals (4.13%). Those who received health services from different providers, dwellers express lowest satisfaction (fair and good rank) to the pharmacy attendants, though they received highest service from them; and highest in favor of private practitioners (97.21%) in terms of service received. It is surprising that a small percent (11.63) received health care service from community clinics that provides cheaper service. The cause might be unavailability of such clinics near distant or these clinics are not much known to them.

Table 10 Health Service Receipts and Level of Satisfaction (percent)

		Quality of Service			
		Poor	Fair	Good	Total
Health Service Provider	Government Hospital	6.98	10.08	24.55	41.60
	Community Clinic	1.29	5.68	4.65	11.63
	Private Hospital	-	0.52	4.13	4.65
	Private Practitioners	0.52	4.39	13.70	18.61
	Pharmacy Attendants	5.43	6.98	11.11	23.51
	Total	14.21	27.65	58.14	100

Data on household expenditure for health care services (Table 9) shows that 41.6% has average monthly household expenditure for health care services is between Tk.500 – Tk.1,000 and 26.4% above Tk.1,000 and 30.7% less than Tk.500, while only 1.3% does not have monthly health care expenditure. A big proportion of slum population when get ill do not visit health care providers, but take self prescribed medicine or use old prescriptions once given by doctors.

Table 11 Preference and Causes of Choice of Health Service (percent)

		Causes of Preference				
		Cheaper	Service Quality	Confidence	Near Distant	Total
Health Service Provider	Government Hospital	49.35	4.65	1.29	0.78	56.07
	Community Clinic	7.75	0.78	1.03	1.81	11.37
	Private Hospital	0.52	1.29	1.81	1.55	5.17
	Private Practitioners	1.03	8.27	4.65	3.10	17.05
	Pharmacy Attendants	8.53	-	0.78	1.03	10.34
	Total	67.18	14.99	9.56	8.27	100

Besides the health service received, head of the households of the slums are asked question about their preference of choice among service providers and most of them (56.07%) put government hospitals on the top followed by private practitioners (17.05%), which private hospitals are at the bottom of their choice list (Table-11). Cheaper health service is the main cause of preferring government hospitals as expressed by 49.35% dwellers. In terms of quality of service, confidence on and distance majority put private practitioners on the top of their choice and pharmacy attendants on the bottom of the choice list. Table also reveals that the monetary issue is the main concern (as usual) to the slum in receiving health service. With urbanization slums will continue to grow, and with them the health problems of their inhabitants. Government should, therefore, ensure slum people access to effective primary health care service through urban local bodies and NGOs to improve their health status. Otherwise, slum growth will perpetuate chaotic living conditions for poor urban populations, accompanied by societal and physical ills (Kaosar & Wahid, 2013).

4.7 Access to Facilities Profile

With increasing urbanization, slum dwellings in Dhaka city is increasing where imbalance between demand and supply of civic amenities is very high. Slum people are highly deprived of basic civic amenities like - water, sanitation, energy for cooking, electricity supply and system of collection and disposal of solid waste. Lack of these amenities in most of the

urban slum dwellings has an adverse impact on the health status of its residents. This study finds that among the slum dwellers in Dhaka city, 66.9% has access to sanitary or pit latrine facilities though number of family use per latrine is very high. The rest one-third people living in slums, mostly children excreta leave in open space that pollute environment and creates health hazard for residents living there. Study also shows that 80.6% household has access to electric supply and 78.3% has access to water supply. But question always left about clean drinking water supply for slum residents. There is a big concern about management of solid waste. Solid waste is collected only from 19.4% slum dwellings which are mainly collected by local system with payments. But local service system dumps nearby street intersections highly pollutes environment and later collected and disposed by city corporation management system. More than four-fifth slum household does not have access to this system due of their lack of affordability or unavailability of the system.

The study also shows that 37.7% has access to government gas supply for cooking and the rest have to manage fuels like kerosene or wood by their own from different sources. Most of the households (46.3%) have to cook on open space managing fuel; 33.1% household shares common kitchen in the slum; 16.6% cooks in the room (most cases single room) where they live in and 4.1% does not have any provision for cooking.

4.8 Security Profile

Slums and squatters are characterized by crowded living conditions, unhygienic surroundings and lack of basic amenities. Besides they live a vulnerable life in the slum areas which is studied under three types of insecurity – Economic insecurity, Social insecurity and Environmental Insecurity. In terms of economic insecurity, Table-12 reveals that household head in slums has uncertainty in getting jobs, hence uncertain income. Among them 31.1% do irregular jobs, 41.56% are under employed and 4.39 are unemployed. Only the rest 22.95 has regular and certain job.

Table 12 Economic, Social and Environmental Insecurity of Slum Household Heads

	Frequency	**Percentage**
Economic Insecurity:		
Irregular Job / work	120	31.1
Under employment	161	41.56
Unemployment	17	4.39
Social Insecurity:		
Unsafe Living and Holding	213	55.0
Harassment	199	51.4
Environmental Insecurity:		
Unsafe Water	168	43.4
Unsafe sanitation	189	48.9
Waste Disposal	312	80.6

In social perspective, their living conditions are not safe, and there is no security of their belongings in the slums. The most social vulnerability is the different types of harassments they face. Among the households in slums 55% feels insecure in slums due to unsafe living conditions and keeping their belongings. Among the respondent household heads 51.4% expressed their vulnerability of facing different types of harassment, mostly oral harassment (35.92%) and physical harassment (12.14%). Only 2.33% exposed victim of sexual harassment cases. Due to fear of social harassment, it is a perception that most of the victims' family does not expose or report the sexual harassment cases. The good part is that

almost half of the families in slum (49.61%) do not face any type of harassment.

Table-12 also presents the environmental insecurity that slum dwellers face in their habitants. 43.6 percent households do not have access to safe and clean water and 48.9 percent does not have access to safe and healthy sanitation facilities. The most environmental problem that they face is the management of waste disposal, both solid and excreta disposal. These unsafe and venerable environmental conditions results in spread of different types of contaminated disease among the dwellers. Local government and NGOs initiative in facilitation of enough number of sanitary latrines, clean water supply line and sewerage connectivity in these slums could improve their slum life.

5. Concluding Remarks

Rapid urbanization in developing counties like Bangladesh is frequently characterized by informal developments. The growing slums and squatter settlements results in social segregation that show disparities in quality of life among urban population. This paper, taking evidence from capital city of Bangladesh, Dhaka, examines the status of sustainable quality of life of urban slum dwellers of Bangladesh. Finding shows that with increasing urbanization, slum dwellings in Dhaka city is increasing which is creating an imbalance between supply and demand for housing and of civic amenities. This imbalance leads to evictions, exploitation, and violence, devastating the lives of people in slums. Relative lack of attention to this section of urban poor has possibly exacerbated multi-dimensional deprivation. Over crowded dwellings in slums results in social and environmental hazards that make their livelihood unsecured and venerable. Low and irregular earning of slum people has impact on their consumption that results in undernourishment. These people are highly deprived of basic civic amenities like - water, sanitation, energy for cooking, clean water and electricity supply and system of collection and disposal of solid waste. Lack of these amenities in most of the urban slum dwellings create a vicious cycle of infections, malnutrition, and poor health (Kaosar & Wahid, 2013). Inclusion of these dwellers in government social safety net (SSN) program that aims to mitigate poverty, not only with money access for destitute and deserted section of population but also access to education, human settlement, treatment facilities (Sifat, 2020), can combat the miserable situation and improve the quality of life of this section of the population and helps in achieving SDG-11. In studying sustainable quality of life of urban slum dwellers taking evidence from major cities gives better scenario of the country, hence future studies will go beyond the study of the capital city Dhaka alone and depict an overall scenario of the country Bangladesh.

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Author Contributions

The paper represents an effort from the three authors. M. Zakir Saadullah Khan has written the manuscript, established paper methodology, collected data, prepared tables and figures, and made analysis and interpretations of the data. Nobin Kundo and Nusafa Khantun Yasmin assisted with identification of the research problem, drafted the questionnaire for survey and collected data and co-authorship of manuscript. The three authors have read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

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