

## Assessing the Real-Life Socio-Economic Scenario of Established Slums in Dhaka: The Cases of Korail and Sattola

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Received for publication: 09 March 2020.

Accepted for publication: 21 May 2020.

### Abstract

The research aims to assess the current situation of three primary socio-economic indicators, namely education, health and water availability at the two most established slums of Bangladesh's capital Dhaka – Korail and Sattola. Surveys, using cluster and then random sampling to target households, and analysis, found that both slums' children's education level was moderate with 52% - 68% and 20% - 28% availing primary and secondary education, respectively; several NGOs had helped to establish brick-and-mortar latrines and disseminate necessary and effective awareness about sanitation; and surveyed slum dwellers were economically strong, with 68% - 70% of the interviewed households' income levels being 10,000 – 15,000 BDT (USD 118 – 178) per month. A comparative analysis with national level statistics also yielded that the conditions in these slums are truly better than previously thought. Primary recommendation includes in-depth monitoring to understand why such large numbers live in slums, even though they can afford better.

**Keywords:** Dhaka, Korail, Sattola, socio-economic issues, slums

### Introduction

Dhaka, the megacity of the developing nation Bangladesh, is home to numerous slums that are claimed by reputed socialists and economists as curses upon the growth and urbanization of the country (Ooi and Phua, 2007). However, it is well known that slum dwellers provide various services for their surrounding neighborhood; they often serve as maids, drivers, mechanics and shopkeepers of the area, who play an important part in the functioning of the locality and the city (Lucci, 2015). Past literature states that the educational, health and sanitation levels of the slums where these informal service providers live are devastatingly low (Khan, 2007; Alamgir et al., 2009). Generally speaking, slum dwellers in the city are disadvantaged in terms of their access to urban services like safe water, electricity, gas supply, toilet facilities and garbage disposal (Tanni et al., 2015). The quality of these services has been found to be poor and the supply remains highly irregular and inadequate (Centre for Urban Studies, 1989; Centre for Urban Studies, 1996b; Nazem et al., 2011). However, recent studies and comparative analyses with other developing nations' slum conditions and national statistics of the country have shown that Dhaka slum residents are living better lives than what non-slum dwellers believe, or the slum dwellers claim (Jorgenson and Rice, 2015; Badhan, 2015).

Hence, the research was adopted, primarily, to identify and then assess the current status of the three primary socio-economic issues – health and sanitation levels, educational status and water availability, faced by the two most famous, established slums of the North Dhaka - Sattola and Korail, by comparing them to national statistics/levels. Additionally, the study aimed to identify prob-

lems related to these factors in these slums and to recommend ways so as to better the management of the slum dwellers, that would consequently and gradually lower the incidences of ‘slum-settling.’ The gap between the reality and recent literature regarding the scenario in these slums, compared to what past literature states and the current perception of these slums also called for studying this issue and begs necessary projects on a larger scale.

### ***Background and Literature Review***

Dhaka City has had the presence of slums for quite a long period time, but they truly began to grow at a faster pace after Bangladesh achieved liberation in 1971; the main reason was the migration of people from the rural areas due to several push and pull factors (United Nations Human Settlements Programme, 2003). All the major urban centers like Chittagong, Khulna, and Rajshahi have slums, but they are mostly concentrated in Dhaka (Hussain, 2013). According to Nazem et al. (2011) it has only taken the last two or three decades for almost 90% of the slums and squatter settlements in Dhaka to develop. The maximum concentration of slum growth (45%) occurred during the period of 1981 to 1990, followed by 26% growth in the previous decade alone (Centre for Urban Studies, 1996a). Up until the early 1970s, all the slums fell under public property; however, in the 90s, when these slum dwellers were being evicted by the government, private landowners started renting out their land to them. This became such a trend that in 2006, it was found that 77% of slums were located on private land (Rojas-Ortuste and Mahmud, 2015). Also, slums are not under the legal judicial system, and therefore often lack basic services such as water supply and electricity and are also believed to have unsanitary conditions (Swapan et al., 2017). According to Rojas-Ortuste and Mahmud (2015), only 8-12% of the latrines in slums are clean. Another study by Kamruzzaman and Ogura in 2009 stated that 89% of slum dwellers lived in houses with only one bedroom and for each person, the average floor space was 13ft<sup>2</sup>. However, since these informal settlements are much more affordable than other living conditions, they have become a hub for the low-income population. Furthermore, it has been estimated that around 3.4 million people (more than 35% of the population) live in the 4720 slums and squatter settlements of Dhaka (BGID, 2017).

From among the research areas, the Korail slum, which is situated near Banani area, has a population of around 50,000 (BRAC, 2017). Most of the houses there are temporary and made of tin-shed, while a few are semi pucca/pucca housing with permanent walls; very few houses have brick and cement roofs and most houses have tin (CI sheet) roofs and only some houses also have roofs made of bamboo, straw and polythene (BRAC, 2017). Additionally, Dhaka WASA is responsible for 60% of the water supply and 40% is bought from outside the area by paying monthly (Khan, 2010). Furthermore, according to a 2011 report by DWASA, the organization provides 226 water supply connections for 15,600 of Korail’s families; water supplies are not very abundant, and residents have to stand in line to collect water for daily requirements. The latrine facilities are very unhygienic and vulnerable according to past literature. Also, according to Biplob et al. (2011), there were about 359 water seal latrines, 250 bucket latrines and 520 hanging latrines. The slum dwellers have restricted access to the city’s health care services and educational institutes. However, different NGOs run their education-based projects in this slum, among which BRAC is running around a hundred schools in the Korail slum area (BRAC, 2017). These facilities and the failure to uproot the residents (Hussain, 2013), despite several attempts by the Dhaka City Corporation place this slum in the list of established ones in Dhaka.

The other research area, Sattola slum (located near Mohakhali area) has approximately 8,000 households in total and the population of Sattola slum is approximately 36,000. People come to the slums from different disaster-prone, river-eroded or monga-affected (famine affected) areas such as the northern chars, haors, and the coastal belt. Although these migrants form a large workforce in Dhaka, they are under constant threat of eviction (Lucchi, 2015). It is important to note that two at-

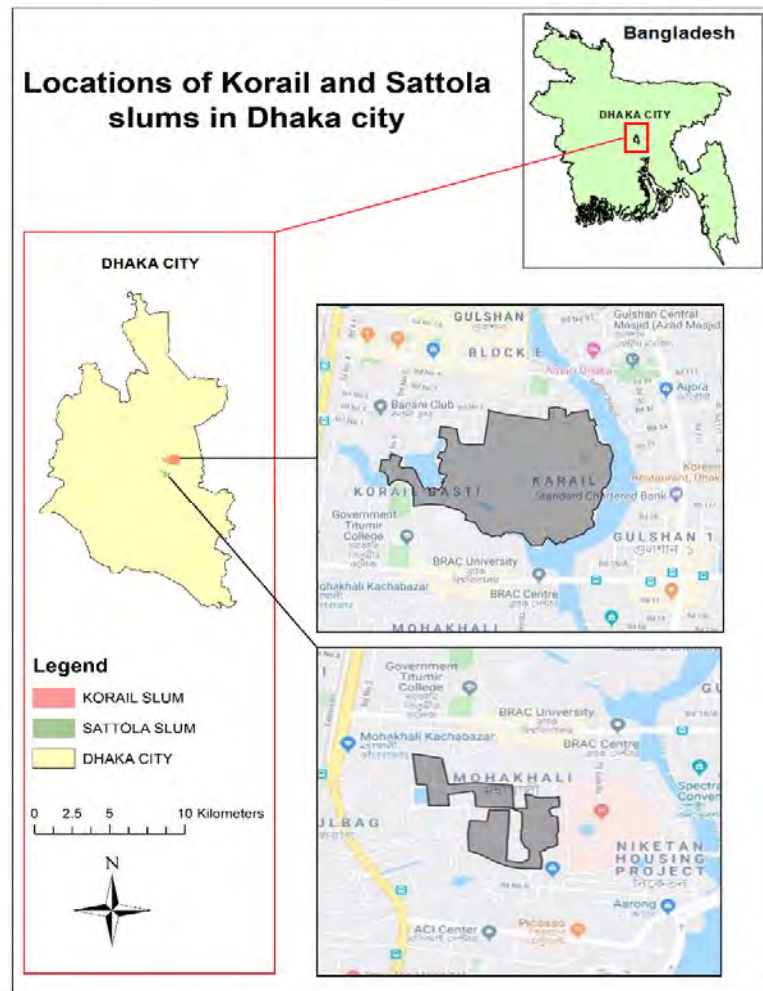
tempts were taken previously to empty the land of the Sattola slum, but in vain; hence, it can be termed established. Based on their capacity and interests, around 7,000 poor households have been given assets, start-up capital and other supports including trainings, linkages for different income-generating activities (IGAs). The households also receive health services through stationary and satellite clinics along with facilities for specialized doctors as well as provision of community-based water points and sanitary latrines. Additionally, a project called "Moving from Extreme Poverty to Economic Empowerment (capacity building, voice and rights) of Extreme Poor Households" since 2009 by Dushtha Shasthya Kendra with help from the Shiree Project (Economic Empowerment Project - EEP) is operating there; it is being funded by UKAID/the Department for the International Development (DFID) and the Government of Bangladesh (GOB). The project is making the economic empowerment of extremely poor households easier by combining household-based IGAs with a community-based approach through organizing households into collective Community Based Organizations (Baten et al., 2011).

Hence, the literature and background concerning the topic in general and research areas in particular can be summarized to state that these slums are in dire conditions where education, water availability and health are concerned. Although, the positive impacts of assistance from concerned NGOs have been highlighted, a sustainable improvement has not been proposed as conclusion which saw the migration of residents out of the slums and into low-income housing.

### **Methodology**

Two established slums in the North Dhaka City Corporation (NDCC) were chosen for the study – the Korail slum near Banani and the Sattola slum in Mohakhali. The selection of the slums was based primarily on their location; the selected slums are situated beside elite, residential areas of Dhaka city, where land prices are high and there is high potential for urban development. The locations of the slums in respect to the city at large is portrayed in Figure 1. The study was based on primary data collection through cluster sampling of one of the inner colonies of each of the slums. Based on the slum guides' information and observations, Korail slum was divided into five clusters, namely – East, West, North, South and Centre. The respondents were mostly targeted from that East and West sides, where the 'longer-living' slum dwellers lived and also, because the guides were well-known at these clusters, and hence, access was easier, and questions were well-received. A similar cluster-sampling process was applied for the Sattola slums. Most of the dwellers in Sattola live in the North and East parts of the slum and so more responses were obtained from those parts. Direct interviews (both structured and unstructured) were used to obtain information from 15 randomly selected households (only from each of the two clusters accessed) in each of the two slums (from a total of 55 households in Korail and 60 in Sattola in the selected clusters). The three inclusion criteria that were employed to select the sample from the cluster population were i) whether the water, sanitation and education information could be gained directly from the respondents, ii) whether the respondents were living in the slum for at least 5 years and iii) whether the respondents were above 18 and married with children. Key informant interviews both on site and off site with guides, elders of the slums who sat at tea-stalls and relevant officials, like local police and NGO workers, were conducted as well, to validate answers from surveys and get a better overview of the areas in question. Furthermore, three focus group discussions (FGDs) were held at the local tea shops in each slum, over the course of the month; this was done to get an insight of the latest news regarding services provided by the government in the area. The local schools, water supply sources, common washrooms and other utilities were visited and observed by the authors and the guide. Data

collected were graphically and statistically analyzed using MS Excel. The data analysis results used an exchange rate of USD1 = 84.5BDT.



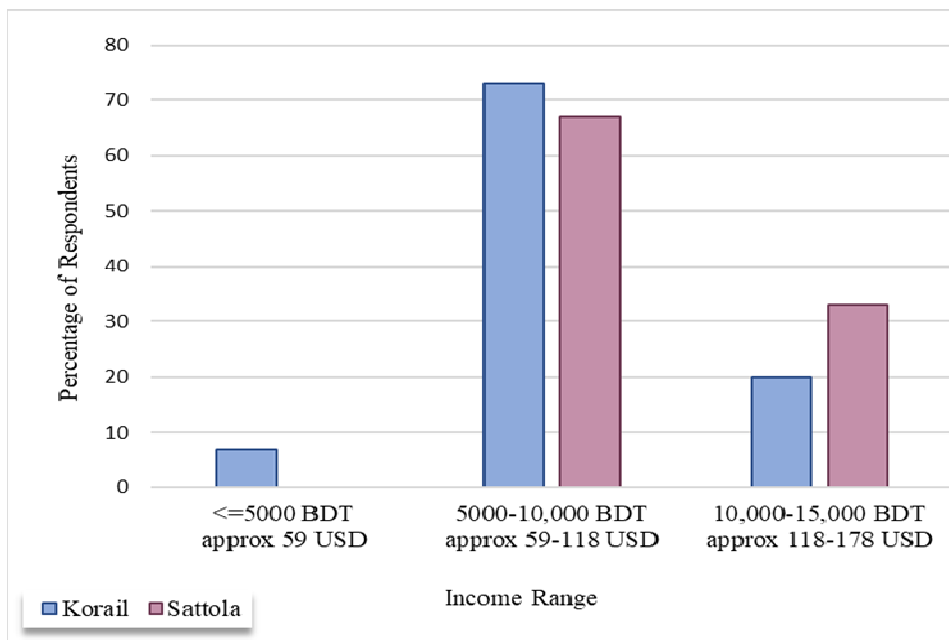
**Figure 1. Locations of Korail and Sattola Slums in Dhaka City**

Unfortunately, reliable figures or maps on the target area of Korail and Sattola slum did not exist; so it was difficult to get accurate data on the number of household or mapping of these two slums. There was also a low number of female respondents compared to the male ones, which may have resulted in demographic skewedness. Furthermore, the access to the areas to interview residents was limited and hence, authors believe a larger-scale project with more sample (in terms of cluster and households) of this type would be a better representation of the population.

### Results

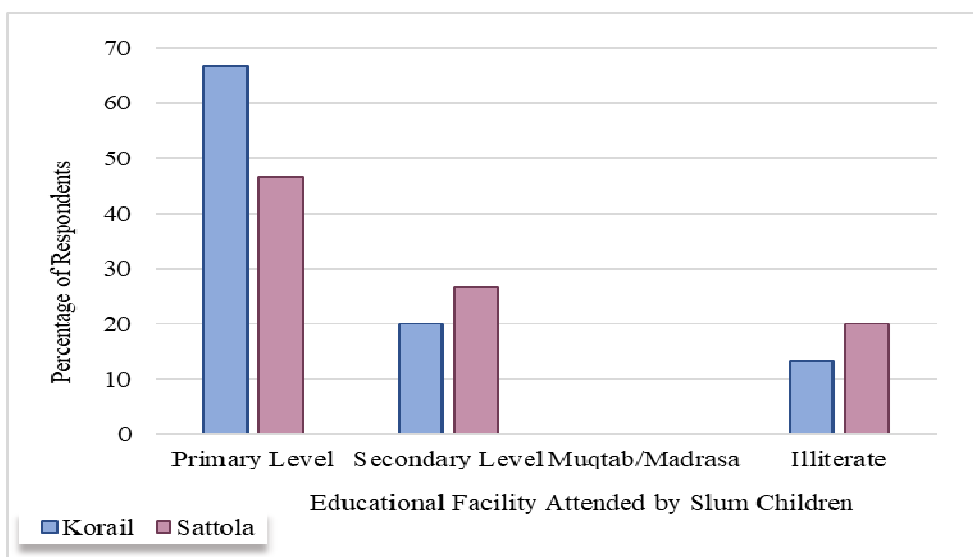
As seen in Figure 2, in the Korail slum, most respondents (73%) earned between the range of 5000-10,000BDT (around USD59-118) and the lowest earning group of the respondents (7%) have an income that is less than or equal to 5000BDT (around USD59). In the Sattola slum, however, no one earned less than 5000BDT (around 59USD) and while 67% of the respondents earned between 5000-10,000BDT (around USD59-118), 33% earned in the income range of 10000-15000BDT

(USD118-178). In the Korail slum only 20% of the respondents earned in this range. Therefore, it can be said that the socio-economic condition of Sattola slum is better than Korail in terms of income.



**Figure 2. Economic Status of Slum Families in Korail and Sattola**

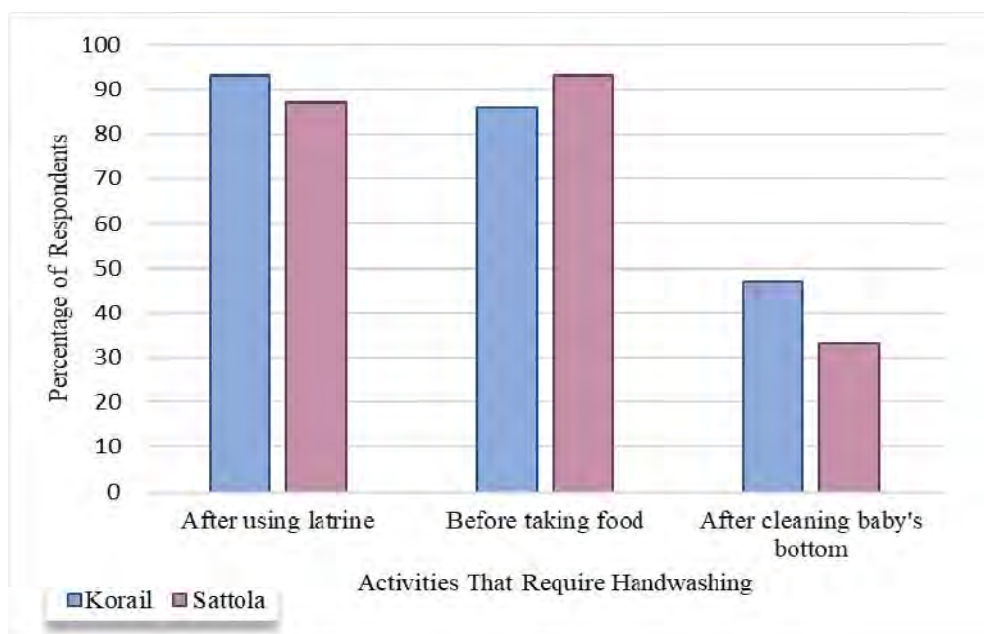
The educational statuses of each household’s children were recorded in both Korail and Sattola slums and yielded that most of the children (68% and 53%, respectively) had primary education. In both slums, secondary level status dropped greatly from primary education, with 20% in Korail and 28% in Sattola. None of the respondents’ children were being sent to the Madrasa, but a significant number of children were also not given any sort of education (Figure 3).



**Figure 3. Educational Status of Children in Korail and Sattola**



The most reported facilities for pre-school education in both the slums were NGO-based pre-school/kindergarten, private pre-school/kindergarten, government pre-school/baby classes attached to primary school and mosque-based Muqtab. Surprisingly, in Sattola, the reasons behind not sending children for pre-school education was stated as failure to afford the expense of education, unavailability of pre-school facilities nearby, and poor quality of preschool education, even with the high levels of incomes found. The authors believed that the parents of these children felt that the cost of not sending their 7/8 and above year olds to work was higher than the benefit of keeping them in school. In Korail too, the reasons stated were the inability to bear the expense of education followed by engagement of the respondents' children in wage earning and baby care. As for secondary education, the reported facilities in and around the Sattola slums were private high schools and government high schools for boys and girls. In the Korail slum, the reported sources of secondary education were co-ed private school and private boys' high school and private girls' high school. The primary reason behind not sending older children to school in both Sattola and Korail slums was stated to be the involvement of children in wage earning, inability to bear the expenses of education, and because these children were needed for household chores

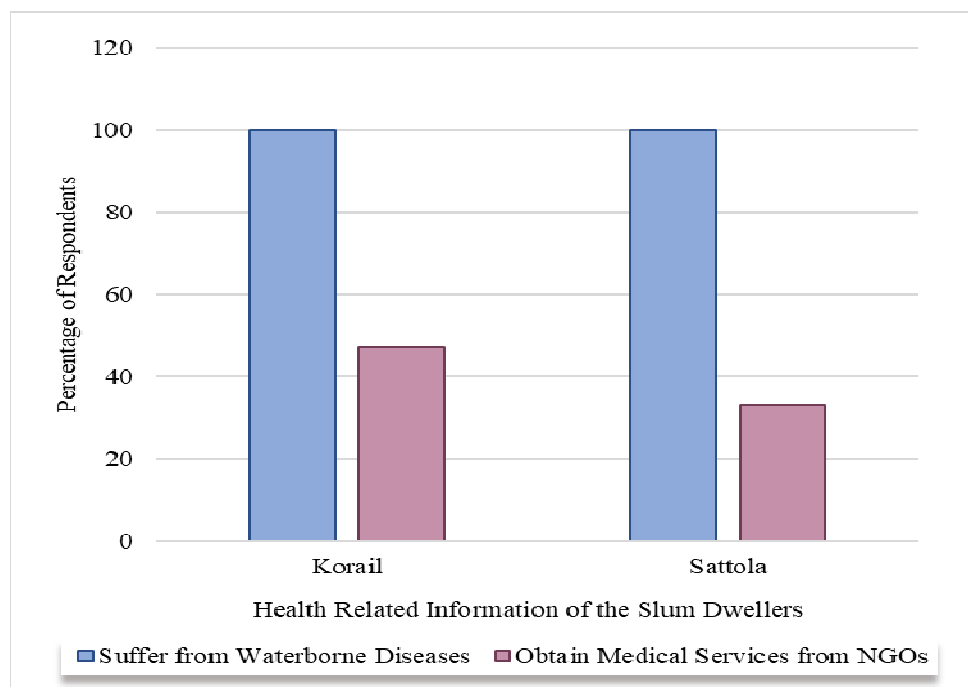


**Figure 4. Sanitary Practices of Korail and Sattola Slum Dwellers**

According to Figure 4, the common times of hand washing found from the respondents from both the slums were: i) after using the latrine ii) before consuming food and iii) after cleaning their baby's bottom. According to the survey, 93% of Korail respondents and 87% of Sattola respondents washed their hands after using latrine. Furthermore, 86% of the respondents in Korail and 93% in Sattola slum washed their hands before consuming food. The authors believed that these results demonstrated that the hand-wash campaigns of the government held in the 1900s and 2000s at slums across Dhaka were successful.

It was also revealed that in both slums, all the respondents had suffered from some form of waterborne disease like diarrhea or jaundice; this was apparently, not a result of bad hygienic practices, but the polluted places where the children played near the slums. Furthermore, in Korail slum, about 47% slum dwellers obtained medical service from NGOs, while the rest obtained medical aid

from government facilities. This is much higher compared to the Sattola slum dwellers where only 33% get medical services from NGOs (Figure 5).



**Figure 5. Health Status of Korail and Sattola Slum Dwellers**

In both the slums, there were no gender separated toilets, except one in Sattola. It was also found that in the Sattola and Korail slums, all the surveyed households had access to fresh sources of drinking water and used improved sources of drinking for cooking and washing purposes. The sources of drinking water observed in Sattola and Korail slums were similar, including piped water connections inside the users' dwelling, plot or yard, public taps/standpipes and tube-wells connected to the WASA pipeline. Additionally, it was found that the sources of water that is shared in the slums among different families are not many. In the Korail slum, an average of 7.28 families shared the same water source, while in the Sattola slum, an average of 7.05 families shared the same water source. In Korail slum it took people an average of 7.33 minutes to collect water, while in the Sattola slum, it took 8.4 minutes. Also, in both the slums the average water consumed per person is relatively close, with 20.33 liters being consumed on average by a Korail slum dweller and 23 liters by a Sattola slum dweller (Table 1). A comparative analysis later revealed that the water-sharing, collection time and per unit availability statistics were more than satisfactory from a Bangladeshi perspective.

**Table 1. Water Availability and Consumption in Sattola and Korail Slums**

	Korail	Sattola
Average number of families sharing the same source of water	7.28	7.05
Average time for water collection	7.33 mins.	8.4 mins.
Average water consumption/day	20.33 liters/day	23 liters/day

**Comparative Analysis: National vs. Primary Findings**

According to Bangladesh Bureau of Statistics (BBS, 2016b), per capita income of Bangladesh was \$1466 (in the 2016 fiscal year). The study found that in Korail slum, 73% of the respondents' yearly income was around 100,000 BDT (approx. USD1420), while 20% earned a higher amount. In the Sattola slum it was found that 67% respondents' yearly income was near the national per capita income and 33% people earned a higher amount. These statistics portray that several of the slum dwellers are not in the poor status umbrella of the country at all; rather they earn almost as much as an average Bangladeshi, if not equal or more. As for medical treatment, the Health and Morbidity Status Survey (BBS, 2012) reveals that under national statistics, NGOs provided around 1.7% treatment to slum dwellers, but in the slums studied, 47% respondents in Korail and 33% in Sattola get medical treatment from different NGOs. Furthermore, BBS stated that the average size of household calculated from Population and Housing Census of 2011 is 4.6 (4.7 in rural area and 4.5 in urban areas). However, from the primary data of this study, it was found that on average, the number of family members per room was 3.8 in Korail and 4.2 in Sattola; both were found to be lower than the national average from the key informants. As for water use, the Bangladesh Sample Vital Statistics report (BBS, 2016a) stated that "the tap water users account for a little more than 27 percent in the urban area." However, in the Korail slum, 93% of respondents used the community pipeline water and in the Sattola slum, all the respondents used community-based water supplied by the NGO, DSK. Additionally, according to the Bangladesh Sample Vital Statistics report (BBS, 2016a), the overall electricity use was about 81% in 2016 and the remaining 19% of the households were dependent on the kerosene and other indigenous sources. However, in both Korail and Sattola slums, all the households stated and were observed to have electricity connections. The comparative analysis has been summarized in Table 2.

**Table 2. Comparison between Primary Findings and National Statistics**

Factors Compared	National Statistics	Primary Findings	
		Korail	Sattola
Yearly Per Capita Income	approx. USD1466	73% of respondents near the per capita income and 20% earn higher or equal	67% earn near that amount and 33% of respondents earn higher or equal
Treatment provided by NGO health facilities to slums	1.7%	47% respondents received NGO health treatment	33% respondents received NGO health treatment
Average household size	4.6	3.8	4.2
Tap water usage in urban area	Around 27%	93% respondents use community pipelines	100% respondents use community-based water supplied by DSK
Electricity Usage	Overall 81% Other sources 19%	100% of respondents had electricity lines	100% of respondents had electricity lines

**Discussion and Recommendations**

According to the data analysis, it is safe to say that the slum dwellers of the established slums are living in better conditions than previously thought. Both primary and secondary educa-



tional statuses were seen to be better than it appears from secondary sources and word of mouth, with most children having been sent to primary school at the very least (Egan, 2014). Also, sanitation practices were good too as a large percentage washed their hands regularly, at appropriate times (from talks with slum dwellers). The slums also had well-built washrooms, with one in Sattola even being gender separated (authors' observation; handwash levels, after using latrine and before consuming food, were high in both slums were between 85 and 95%). Additionally, safe and fresh water was available for all slum dwellers with the involvement of middlemen and all the Sattola households surveyed, received their water from the NGO DSK (93% in Korail; 100% in Sattola vs. 27% urban access levels). Lastly, both slums also had operational electricity lines, although most were illegally connected (100% in both slums vs. only 81% as the national statistic). Based on the fact that many of respondents earned around or higher than the per capita national income every year (20% in Korail earned near or higher than the national income; 33% in Sattola earned higher than the national income), it can be believed that numerous slum dwellers' economic situation is good enough for them to migrate out of these slums. However, they do not do so due to the lower price of living in slums and the availability of facilities at cheaper rates.

Based on this primary study and learning from literature review, the authors recommend that the government should intervene in some of the facility provisions; water supply should be provided by the government itself to eliminate the involvement of middlemen, as this raises the water prices; electricity lines are illegally obtained by the dwellers, which could be avoided if the government supplied the connections; and primary level education should be improved by addressing the reasons behind the rest of slum dwellers not sending their children to school as there is a stark difference between primary and secondary level education levels, which also needs to be addressed. Secondary level education should be made more affordable and accessible, along with the provisioning of vocational training centers with free/subsidized tuitions. Awareness about the importance of children's education and continuation to higher studies should also be spread, with more emphasis on reduction of child labor, along with the introduction of monetary incentives or legal disincentives. Also, further data collection is needed to identify important social dynamics for a resultant improvement of the dwellers' financial/economic conditions and to find out the real reasons and implications of high-income residents living in these slums. Additionally, further analysis is also needed to establish whether literature review and current observations are in sync, especially for the less established slums as well. This will help to recognize the reasons for 'voluntary slum dwelling.' The authors declare that only through proper, but gradual eviction and managerial policies should be carried out by the government. The economically solvent slum dwellers should be identified and given necessary living arrangements, in order to stop slum settling.

### **Conclusion**

Based on this study, it can be concluded that the overall socio-economic condition of the slum-dwellers of the two most established (and famous slums) of the capital - Sattola and Korail slums – are better than what previous literature has portrayed; it is also quantitatively more satisfactory than what many dwellers claim in qualitative terms during interviews. The income levels show average to good economic condition; however, significant improvement can be made in this sector via the dissemination of free/subsidized vocational trainings among the youth. Additionally, even though the primary education levels are up to the mark, the lower percentage of secondary education levels show high rates of drop-out. Hence, attention must be brought to identify and mitigate the reasons behind this, as keeping children in school till standard 10 will automatically improve the future economic condition; many may even voluntarily move out of the slums to gain better reputa-

tion and mix with richer circles. Also, the sanitation and hygiene facilities are better than what literature and dweller opinions had expressed in both the slums. Additionally, in terms of water availability, water collection times and household space for members, most of the slum-dwellers are doing better than the national average; water prices, however, has large scopes for improvement via government intervention. What is surprising is that almost all of them have electricity in their houses, albeit suspicious circumstances. Sattola seems to be doing better than Korail, probably because of its smaller size and location near one of the largest commercial areas of Dhaka, Mohakhali, in contrary to Korail, which is much bigger and is located near a residential-cum-commercial area, Banani.

It is evident that most lead better lives than an average Bangladeshi citizen as the comparative analysis with the national data revealed. Hence, it can be deduced that many dwellers can easily migrate from slums to cheap, but proper housing, but do not do so because of the low living costs and free medical/sanitation facilities; there may be other sinister reasons too. Thus, these slums should be monitored, and in-depth studies conducted to evaluate the reasons for this lethargy in movement as a first step towards mitigating and finally, getting rid of these temporary housing facilities often termed as the curses of urban areas. Support must be given to the dwellers, to not only improve their socio-economic statuses, but also to empower and push them to move out of the burden of urban areas, these slums.

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