

Analysis of Housing Satisfaction of the Dwellers in Pabna Sweeper Colony as urban low-income housing in Bangladesh

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Abstract

The housing situation of Bangladesh's urban poor is deplorable. Bangladesh's progress in terms of healthy housing is hampered by rapid population expansion, an unequal political hierarchy, a poor economy with widespread poverty, and a lack of interest in devising and executing practical measures. Housing for the poor, however, is a basic necessity for survival. The goal of this study is to assess user satisfaction of the Pabna Sweeper Colony in terms of lodging, utility services, and community facilities, all of which are important aspects of housing. The low-income residents of Pabna Municipality have low sanitary and educational facilities. They grudgingly accept the reality of their living quarters. They lack access to basic needs such as gas for cooking, drainage systems that are exposed and dirty, making the environment unlivable, and dwellings and housing elements that are barely adequate to support life. Women and children suffer as a result of their lack of privacy and open space. These factors have resulted in an unfavorable condition in the Pabna Municipality. The government has made very little effort to solve housing issues, such as accessible utility services, sufficient sanitary and drainage facilities, and community services. The significant findings of this study showed a relationship between housing satisfaction and the quality of basic facilities.

Keywords: Housing Satisfaction, Sweeper Colony, Low-income housing

Introduction

Housing satisfaction describes how people feel about their homes (Aulia & Ismail, 2013), and a process of evaluation between what was received and what was expected (Parker & Mathews, 2001). Housing has gained enormous attention in interdisciplinary research for several decades (WHO, 2008; Krieger & Higgins, 2002; Baiden and & Price. 2011; Parkes, Kearns, & Atkinson, 2002). It is a complex construct because it differs depending on the location, time, and purpose of the assessment, as well as the assessor's value system, involving a diverse range of people including architects, planners, sociologists, psychologists, and urban geographers (Bardo & Dokmeci, 1992). Bechtel (1997) observed that residential satisfaction is influenced by several factors, including not only the house and its physical attributes but also the surrounding neighborhood and social character.

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Residents who are satisfied with their housing and living conditions have better mental health, are less mobile, and have strong links to their families and neighbors, which predict higher housing satisfaction (Khan, Khan, Hanjra & Mu, 2009). The discrepancy between current and desired housing needs created housing stress and dissatisfaction (Mohit & Raja, 2014). According to the Constitution of Bangladesh, the state must ensure equality of opportunity for all of its citizens and remove social and economic inequality (articles 19.1 & 19.2; Ministry of Law and Parliamentary Affairs, 2009). However, in Bangladesh, several public housing facilities have been provided by Government for several income groups, which are sometimes questionable, especially for low-income housing.

Sweepers are a socially marginalized and undervalued group in Bangladesh (Hossain, 2013). They sweep and clear garbage, human filth, and other debris. They are frequently referred to as "*Methor*" in the country, and Mahatma Gandhi in India labeled them "*Dalit*" or "*Harijan*" (son of God) (Chowdhuri, 2011). Since the Mughal period, the sweeper have been involved in cleaning jobs for commuters. In the 18th century, when the British Government established its new administration, it gets vital to employ several sweepers to clean up the city. For this reason, the British Government picked up the Harijan Community from Northern India and East Bengal. Even after the independence of Bangladesh, the Sweeper Community remained untouchable during the period of the ancient Indian and Mughal governance. Though they are engaged in essential profession like sweeping, the majority of the people's ideas have not been altered (Razzaque, 2010).

Bangladesh constitutes approximately 3.5 and 5.5 million sweepers (Hossain, 2013). They were regarded as low caste members of Hindu (*Horizon*) communities, and their traditional occupation is cleaning. Sweeper settlements are deprived of the civil rights guaranteed under the People's Republic of Bangladesh Constitution. They lack adequate housing, sanitation, health care, and education, among other things, throughout the country. They are also denied the far more basic constitutional rights, such as "all are equal before the law," as laid out in the constitution (Razzaque, 2010). Residences of the Sweeper colonies of Dhaka City also is unpleasant and unsanitary, fostering an uncomfortable environment (Masud, 2006). The residents of these colonies have been living in deplorable conditions in their little shanties, which emit a putrid smell of trash and rubbish. There is a severe dearth of pure drinking water across the colony (Masud, 2006). In Bangladesh's societal and economic setting, the *Dalit* inhabitants have few options to enhance their livelihoods and better their economic condition. Access to health services is also influenced by economic hardship. On the other hand, economic marginalization appears to limit healthcare provision, health-seeking behaviors, and access to other critical services supplied by individuals and communities (Kabir, Maitrot, Ali, Farhana & Criel, 2018). The sweeper colony of the Pabna Municipality has various environmental, economic, and social problems that affect the living conditions of the people. Therefore, it is essential to ensure a better quality of life for the people and a healthy environmental condition for the sweeper dwellers. Poor housing is responsible for the social, physical, and mental diseases of the occupants and maladjustment of a different kind, which are barriers to economic development (Eni, 2015).

Utility services include the distribution of electricity, gas, water, sewage and sanitation, transportation and communication, etc. Satisfaction refers to the state of being satisfied. Community facilities include education, health, parks, playgrounds, community centers, libraries, the police, fire, and ambulance services, etc. The following are some of the characteristics of the residential environment - Dwelling unit, play area, parking, prayer hall, perimeter roads, pedestrian walkways, social environment, noise, accident, safety, security control, and community relations. (Mohit & Raja, 2014). Including all these services, a housing assessment may conduct.

Aim and Objectives

The goal of this study is to identify the current condition of the utility and community service facilities of the sweeper colony, as well as to examine the housing situation in terms of housing facilities. Furthermore, this research will aid policymakers in developing a future development strategy for the sweeper colony or any other low-income housing area in a similar context.

Methodology

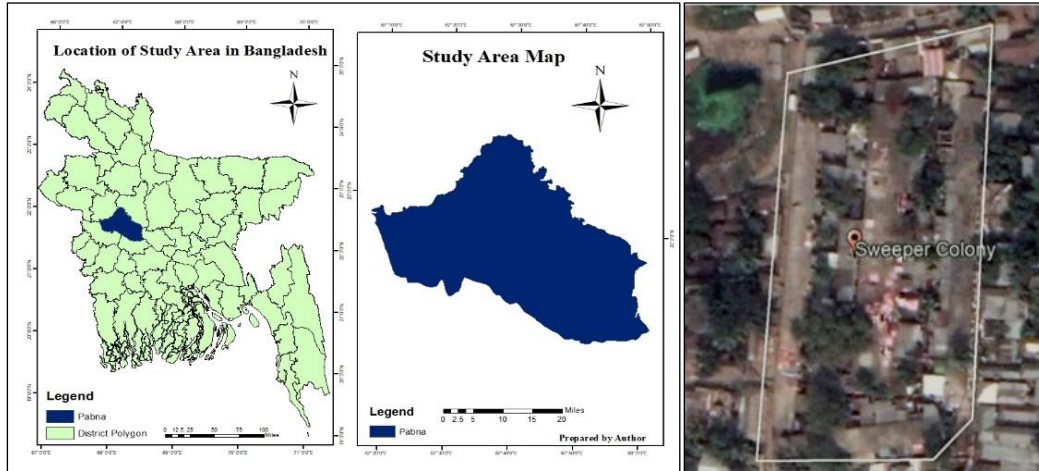
Primary data were collected through field observation, questionnaire survey, and interviews of the people. Secondary data were collected from newspapers, journals, reports, and web browsing. There are 151 Households in this colony. For the questionnaire survey, randomly, 100 households from 151 households were selected to obtain information about the social and environmental conditions of the sweeper colony. Data were analyzed, and graphs were produced by Microsoft Excel. After setting objectives and literature review, different types of utility services and community facilities, i.e., accommodation facilities, water, electricity, and gas supply, pedestrian facilities inside the colony, education, drainage facilities, etc. were analyzed according to the satisfaction level of the residents. Some of the service facilities were analyzed based on people's perceptions.

Study Area

Pabna Municipality is a municipality of Pabna District, Rajshahi Division, Bangladesh, and the administrative capital of the eponymous Pabna District. It is located 161 km North-West of Dhaka and 110 km East of Rajshahi. This area lies between 23°53' to 24.01° north latitude and between 89°09' to 89.25° east longitude in the sub-humid area of northwest Bangladesh (BBS, 2011).

Over 1500 sweepers dwell in the Pabna Sweeper Colony located at Dip Char, Ononto Bazar, Pabna (Figure 1). There are 81 rooms for sweepers in this colony, each resided by one family. The settlement was formed on 1.45 acres of land and divided into two categories. The income level of sweepers of the colony ranges from 10,000 to 15,000. The municipality pays them BDT 1500 per month, which is insufficient for them to maintain the least standards of life. Therefore, most of them are engaged in sweeping activities of other institutions (i.e., schools, colleges, banks, offices, etc.). Among the colony people, 46% are female, 41% are male, and the rest, 13%, are children aged under 18. Educational qualification of the sweeper colony people ranges from class eight to ten, with only 1% of the residents have completed their education. Maximum families are joint families with

7-9 members (50%), and joint families with 4-6 members are 45%. Only 5% of respondents live in nuclear families.



Source: Prepared by Author, 2020

Fig. 1: Location of the Study Area

Field Survey and Analysis

Accommodation Facilities

As accommodation facility is one of the basic needs according to the constitution of Bangladesh, this facility is considered in this research.

Three types of structures have been observed in the study area. Most of the structures are semi-permanent, made with brick walls and corrugated iron sheet roofs. Well-decorated *pucca* structures, made with brick and cement, are also found in the surveyed area. A few *kutchha* structures, built with bamboo mat fenced and corrugated iron sheet roof and floor space made with mud are also found. Wooden rafter and purlins, corrugated iron sheets are fixed on wooden frames by nails to construct the shed. Bamboo mats, bricks, and corrugated iron sheets are used as the walls of these houses (Figure 2).



Source: Field Survey, 2020

Fig. 2: Condition of the accommodation facility in the colony

According to the respondents, Pabna Municipal Authority provided one single room for every family. The most common complaint of the residents is that a large number of family members from three generations of extended families live together in small living spaces.

It is pretty impossible to stay for a joint family in one single room and do all the household work. Sometimes the houses are transformed to their needs by building more rooms or adding partitions, making the outdoor spaces more congested and unplanned. They created more rooms or made a partition inside the room for their living. The indoor area of the room is full of crowding with basic furniture, fuel, cloth, food, water, daily necessities, etc. The accommodation facility for these dwellers is cost-free from the municipality. Only 81 rooms are not sufficient for 1500 people and 151 households.

From the respondent's perception and field observations, several problems regarding the dwelling units are identified. Insufficiency of fresh air and light, congestion and overcrowding, unhygienic and open drainage beside the courtyard, lack of privacy for women, lack of space for cooking, eating, sleeping, child-rearing, etc. are widespread. From the survey (2020) it is found that 50% of the respondents of the colony are very dissatisfied with the accommodation facility, where 27% of the respondents are dissatisfied, 14% are moderately satisfied, and only 9% agreed to satisfaction with this facility.

Water Supply

The municipal authority provided four tube wells to the colony (Figure 3). But these four tube wells are not sufficient to meet the needs of 1500 people. According to the respondents, this water is foul. People of the sweeper colony also use submersible hand pumps for satisfying their daily needs of water for drinking, domestic, and sanitation purposes (Figure 4).



Source: Google Earth Pro, 2020

Fig. 3: Different types of water sources (tube well and taps)



Source: Field Survey, 2020

Fig. 4: Water supply facilities

The majority of the respondents (45%) are highly dissatisfied, and 15% are unhappy with water quality. On the contrary, 30% of people are delighted, 5% are satisfied, and 5% are moderately satisfied with the condition of the water supply (Field Survey, 2020).

Sanitation Facility

The common phenomenon of Bangladesh's urban housing for low-income people is poor sanitation. The municipality had provided ten toilets for the colony people, but all are now damaged (Figure 5). For this reason, the residents of the colony constructed baths and toilets privately. 30% of the respondents are very dissatisfied with the facility, and 45% are dissatisfied with this facility. In comparison, only 15% are moderately satisfied (Field Survey, 2020).



Source: Field survey, 2020

Fig. 5: Damaged sanitation facilities of the colony

Electricity Supply

The municipality provides electricity service in the colony. Colony people do not have to pay for the facility. A few women use induction ovens and rice cookers for cooking purposes in the colony. There are no street lights available in the colony. The municipality used to provide street lights in the past. But due to the poor maintenance, all lights are unusable. Survey (2020) data revealed that 60% of the respondents are satisfied with the electricity supply of the municipality. On the other hand, 10% of the respondents are dissatisfied with the facility for the interruption of electricity supply (Figure 6).



Source: Field Survey, 2020

Fig. 6: Electricity service facility in sweeper colony

Gas Supply

The municipality does not supply gas to the sweeper colony. So, the residents of the colony use induction ovens, cooking gas cylinders, rice cookers, and clay-made ovens for cooking purposes (Figure 7). As the municipality does not provide this service to the colony, 40% of the respondents are highly dissatisfied with their negligence in this facility provision. 25% of the respondents are dissatisfied with this service facility. On the other hand, 20% are moderately satisfied, and 15% are satisfied with this facility (Field Survey, 2020). Basically, colony people with better-earning levels are confident with their arrangements of gas supply facilities.



Source: Field survey, 2020

Fig. 7: Substitutes of gas supply facilities used by colony people,

Education Facility

The education facility is one of the most important fundamental elements of community housing. The municipality provides one primary school to the colony (Figure 8). Temporary teachers are assigned to provide basic educational knowledge to the colony's children. None of the students went to university or took to higher education. Financial constraints, social circumstances, religious superstitions, etc. are the crucial barriers in the way of receiving education for the children of the colony, especially female children. from the survey (2020), it is found that 35% of the respondents are highly dissatisfied, 30% are fairly dissatisfied, and 30% people are moderately satisfied with the education

facility of the sweeper colony. Colony people are rarely satisfied with the education facility provided by the municipality to the colony people (only 5%).



Source: Field Survey, 2020

Fig. 8: Education facility in sweeper colony

Solid Waste Management

Integrated solid waste management is one of the primary concerns for sustaining a pollution-free environment. Unfortunately, there has no waste collection system in the study area. As a result, people throw waste into the adjacent waterbody (Figure 9). This waste cause water and air pollution in front of the colony, which is hazardous to colony health. 45% of the respondents opined that they are highly dissatisfied with the solid waste management facility in the colony, 30% are dissatisfied, 20% are moderately satisfied, and only 5% are satisfied with this facility. However, none of the respondents were delighted with this facility (Field Survey, 2020).



Source: Field Survey, 2020

Fig. 9: Dumping waste in the water body nearby the housing area

Drainage Facility

Drains are the open, polluted, and poor structures that pose severe health problems in the colony. During the rainy season, excess drainage water causes waterlogging. There is no open space available in the territory; as a result, wastewater enters houses, causing numerous sufferings to the colony's people. The depth of drains is not sufficient to capture the wastewater of the entire territory (Figure 10).



Source: Field Survey, 2020

Fig. 10: Condition of Drainage system

On average, gutters of the sweeper colony are of a lower depth of about 10 inches. For this reason, the capacity of the drains is not sufficient. This insufficiency of capacity results in waterlogging and pollution in the colony. 75% of the respondents are highly disappointed with this facility, and the rest are dissatisfied with drainage facilities in the colony (Field Survey, 2020). None of them stated their satisfaction with the drainage facility. The poor quality of the drains and insufficient capacity are responsible for this dissatisfaction of the colony people.

Transportation Facility

Transportation facilities include accessibility to workplaces and other necessities and pedestrian facilities of an area. The roads outside of the colony are made of mud and bricks. Auto van can reach up to the gate of the community and connect easily to the main town. However, there is no accessibility to any kind of transportation within the area. There is no ambulance and fire service access to the site also. Hence, there is created dissatisfaction as if any occurrence happens inside the area or if anyone is fallen sick the residents have to carry them in their lap to go to the nearby hospital.

Pedestrian Facilities Inside the Colony

The pedestrian facility is entirely unplanned inside the colony. Pedestrian roads are mostly made of mud without any pavement (Figure 11). Lack of open space, insufficient width of pedestrian roads, lower height of the roads and adjacent open drains, etc. are responsible for poor pedestrian facilities in the colony. Drainage facilities and transportation facilities are interconnected with each other. In the rainy season, numerous sufferings occur here because of waterlogging due to open and poor drainage facilities. Figure 12 shows the location of the pedestrian roads inside the study area.

Survey (2020) results find that 60% of the respondents are highly dissatisfied with the condition of the pedestrian road. 30% are dissatisfied with this facility. On the other hand, 10% are moderately satisfied with this facility. But no people are assertive about the pedestrian facilities inside the colony.



Source: Field survey, 2020

Fig. 11: Poor quality of pedestrian facility inside the colony



Source: Google Earth Pro, 2020

Fig. 12: Pedestrian pattern of the colony

Vehicular Accessibility of the Colony

Auto rickshaws and manual rickshaws are readily available outside of the colony. According to survey data (2020), 55% of the respondents are highly dissatisfied and 25% are dissatisfied with this service facility. On the other hand, 20% are moderately satisfied with this facility. But none of them are pleased with vehicular accessibility-related facilities outside of the colony.

Market Facility

People buy their daily necessities from the adjacent *Ononto Bazar*. Most of the respondents (40%) are satisfied with this facility and 5%, 20% 25%, and 10% of the respondents opined that they are highly satisfied, moderate satisfied, dissatisfied, and highly dissatisfied respectively (Field Survey, 2020).

Security System

The security system includes a degree of freedom, human rights and rights of law, etc. From the survey (2020) it is found that 55% are highly dissatisfied with the security system and 20% are dissatisfied. On the other hand, the rest of the respondents are satisfied with the security system. The absence of street lights, drug addiction among the sweeper, financial constraints, and usury are the main reasons of the poor status of the security system in the study area.

Community Service Facility

In the study area, dwellers are the low-caste people among Hindu Communities. There are two common temples located inside the colony. *Durga Puja* is their main festival. Besides two temples, every family has a prayer area inside their house for their adorable god and goddess. They worship with flowers, water, lamp, and so on. *Kali, Durga, Shib, Manosa, Laxmi, Saraswati, and Gonesh* are their main gods and goddesses. During the marriage ceremony and *Kali Puja*, they take alcohol, and sometimes it causes violation in the colony.

45% of the respondents of the colony are highly dissatisfied with the community facilities of the colony. 15% are satisfied, 5% are moderately satisfied, 10% are satisfied and 25% are highly satisfied with this facility of the colony (Field Survey, 2020).

Discussion of the Results

In light of the above analysis, it is evident that the residents of the sweeper colony of Pabna Municipality are pretty dissatisfied with their living conditions, housing facilities, and utility services. They are passing their lives brutally and in an unhealthy way. Among other things, they lack appropriate housing, sanitation, health care, and training. They are devoid of the most fundamental constitutional rights. Rapid population growth, unjust political hierarchy, a depressed economy, prolonged poverty, and inadequate public policies hurt their livelihoods. The residents surveyed reported that groundwater is the only source of water supply for 1500 people. So, regarding water supply facilities, they conveyed greater dissatisfaction. The quality of sanitary facilities indicates a more significant percentage of unhappiness among the residents. Although inhabitants of the settlement do not have to pay for the power, all lights are worthless owing to the poor upkeep. Electricity is one of the very few indicators that could satisfy the inhabitants. However, the colonial sweepers are far behind the age in terms of education. The colony also lacks a proper waste management system despite being the ones cleaning toilets, drains, etc. for the public. The Government and NGOs have placed no initiatives on developing a waste-free colony. In the colony, wastewater enters homes which causes the territory's inhabitants various sufferings. Drain depth is not sufficient to collect the whole colony's wastewater. This inadequacy leads to waterlogging and contamination of water bodies in the colony. The settlement is accountable for the lack of open space, inadequate width of pedestrian routes, lower road height, open drains, etc. Transportation and drainage installations are linked. During the rainy season, there creates waterlogging due to open and inadequate drainage systems. The vehicular system of the colony is not satisfactory either.

Moreover, the municipality does not provide gas supply to the residents which causes more suffering. The health facilities are substantial but need more improvement for higher residential satisfaction. The colony's market was comparatively the most satisfactory aspect of their housing. The security is surprisingly gratifying for the residents as people usually try to avoid such low-income colonies. However, community service still lacks extensively. All in all, it can be stated that the community people survived by their fate.

Conclusion

People in the Pabna sweeper colony have been defaulting on their loans, making them more vulnerable. Community involvement in designing programs and places that represent community objectives, needs, aspirations, and budgets may be a viable option with the help of architects, engineers, planners, and researchers. Governments should focus on securing good utility facilities for the residents of low-income housing like the study area. Researchers may advise on how to best use limited resources within such areas. People in the community can transform their houses into multi-story buildings and repurpose vacant property for community use. The municipal authority can take the initiative to build multi-story buildings for them. NGOs can assist them by providing low-interest housing loans to help them build permanent structures. Overall, this research has indicated the possibilities of increasing the quality of housing and environmental condition of the Pabna sweeper colony.

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