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Research Paper

A study on housing condition and related service facilities for garment workers in *Savar*, Dhaka, Bangladesh

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ABSTRACT

Now-a-days the industrial revolution is taking place in Bangladesh like the other developing countries. The number of industries is increasing resulting the increased number of migrant people as workers. This large amount of people demands housing. To meet this demand, the land owners are constructing houses without considering the quality. This study tends to explore the existing housing condition of garment workers in a sub-city *Savar*, near Dhaka. All the information about the garments workers were collected by observation, questionnaire survey and personal interview method. The aspects that mainly considered in this study were type and material of house, size of room and occupancy, related facilities and services such as water supply, electricity, drainage, solid waste management and so on. It was found that the garment workers usually rent a single room in a group housing whatever the family size is. In a group housing a minimum of 5 and maximum 35 family lived. They shared the kitchen, toilet and bathroom. A considerable number of workers (about 40%) were still use wood in the kitchen. Corrugated Iron sheet was the main housing material as well as brick, concrete, bamboo and mud were used. The workers living in the study area faced the problems of frequent load shedding, lack of proper drainage system and absence of solid waste management system. In fact, the garment workers are rural migrants and inexperienced in urban life. They are not concerned about the facilities they should get with housing.

1. Introduction

1.1 Background and aim of the study

The readymade garments (RMG) industry acts as a catalyst for the development of Bangladesh. It provides employment to about 4 million workers (BGMEA, 2015). The workers in garment industries are rural migrants. The number of industries is increasing as well as the number of migrant people. These people demand housing and related facilities nearby the industrial areas. To meet the higher demand of housing, the land owner constructs

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Fig. 1. Eleven people sleeping in a small room (Saifullah, 2013).

Fig. 2. A moment of recreation at home (Saifullah, 2013).

houses without considering the quality of housing. They try to make much profit with low investment. Many researchers (Dasgupta, 2002; Alam, 2004 and Mariani & Valenti, 2015) have investigated the working conditions in garments industry of Bangladesh. However, living conditions of the garment workers are seldom studied. In his book 'Industrial housing' Knowles, M. (1920) mentioned the origin, development, examples, advantages of industrial housing, physical characteristics (topography, soil condition, demography, means of communication), utilities (water supply, sewerage drainage, collection and dispose of town waste, gas and electric service) and management of the industrial towns in that early period of time. Saifullah, M. (2013) wrote a feature on the lifestyle of the garment workers showing some photographs captured by Taslima Akter in the Daily *Prothom Alo,* the most popular Bangla Newspaper. Two photographs of that feature are shown in Fig.1 and Fig.2.

The garment workers in Bangladesh are low income people and the demand of better housing is very low among them. About 20% people of the total population depend on the garments sector. In the National Housing Policy of Bangladesh (NHA, 2015), the issue of housing for the garment workers is totally ignored. This study

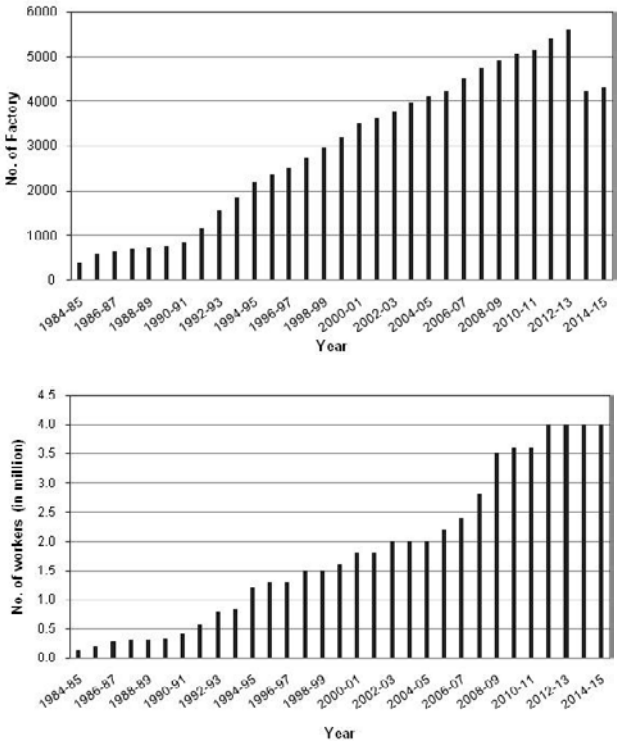

Fig. 3. Growth of RMG factories and employment in Bangladesh (BGMEA, 2015).

tends to find out the existing condition of the garment workers housing in *Savar*, an industrial sub-district within Dhaka Statistical Metropolitan Area (SMA). The aspects that mainly considered in this study are housing type and material, room size and occupancy, related facilities and services such as water supply, electricity, drainage, solid waste management and so on.

1.2 Garment industries in Bangladesh

The garment industry in Bangladesh is expanding since 1984 and now there are more than 4000 factories in operation, most of which are situated in Dhaka. These industries provide employment to about 4.0 million workers. Figure 3 shows the growth of RMG factories and employment in Bangladesh from 1984 to 2015. About 78 percent of the country's export earning comes from this sector. The prime reason why garment industries have come out to be the champion in the field of export is obviously the cheap labor. Labor is not as cheap anywhere in the world as it is in Bangladesh. Women contribute to the working force in these garment factories, as they are relatively cheaper than men. The garment workers are migrated from village and inexperienced in urban life. They face difficulties to adopt with urban life style, particularly in finding out shelters.

2. Methodology of the study

2.1 Study Area

Most of the garment industries are growing in Dhaka and in its surrounding areas. *Savar* is a sub-district of Dhaka, about 20 kilometers from the capital. It is an industrial zone covering hundreds of factories and manufacturing plants, significantly ready-made garment (RMG) industries. Those industries demand a lot of workers and therefore, people from different parts of the country come here mostly as rural migrants. They live in different locations of this area. This study focused on the housing condition of the garment workers in *Pathalia* union (*union* is the lowest tier of local government) of *Savar*. The total population of *Pathalia* union is 93150. Males constituted 48508 of the population, and females 44643 according to the Bangladesh census 2011 (BBS, 2011). Figure 4 showed the location of *Savar* in Dhaka district and the location of study area (*Pathalia*) in *Savar*.

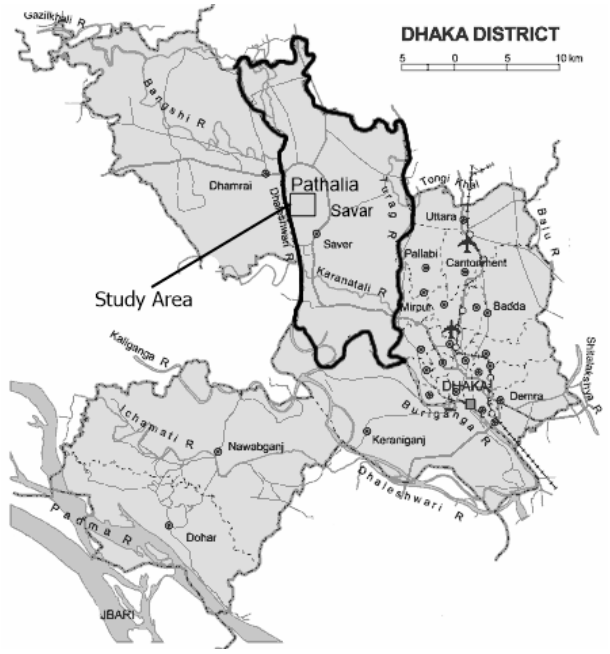

Fig. 4. Location of *Savar* (highlighted boundary) in Dhaka district and location of study area (Pathalia) in Savar.

2.2 Data collection

There were several methods of collecting data, particularly in surveys and descriptive research. By observation, interview method and through questionnaires method were used in this research. Here questionnaire survey was done in *Pathalia* union where the amount of garment workers was high in order to assure a response rate as high as possible. As the garment workers were not well educated so the surveyor asked them the questions from the questionnaire and they answered them. In this study accidental sampling method had been used and finally, 200 workers were interviewed.

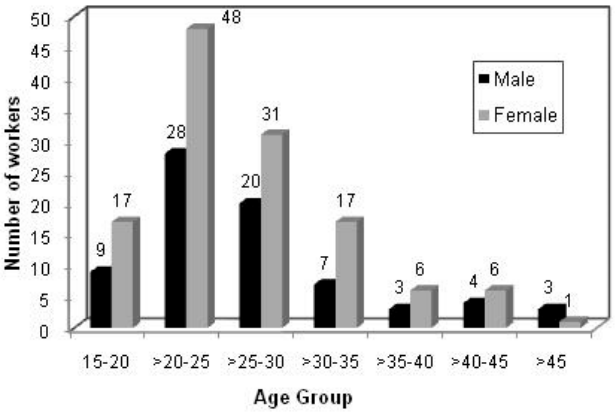

Fig. 5. Number of workers according to age group and gender.

3. Findings of the study

Demographic information of the workers, information about housing situation and related facilities, and some other issues are discussed here.

3.1 Demographic information of the workers

3.1.1 Number of workers by gender, age group and marital status

In this study it was found that among the 200 workers,

Table 1. Demographic information of the workers.

Gender	Number	% of total	No. of married workers	% of married workers
Male	74	37%	48	65%
Female	126	63%	101	80%

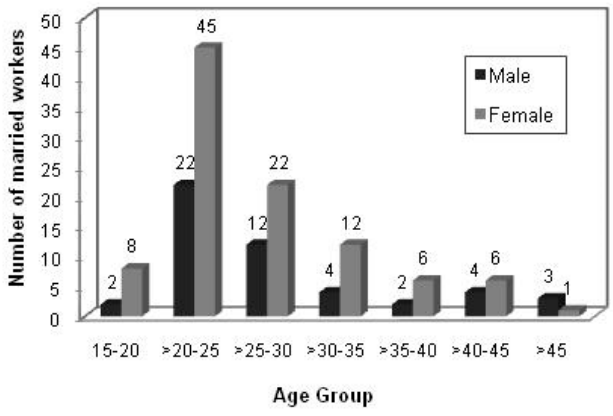

Fig. 6. Number of married workers according to age group and gender.

126 were female workers and 74 were male workers. Among the workers 65% male and 80% female workers were found married. Table 1 showed the demographic information of the workers. Figure 5 showed the number of workers according to age group and gender. Again, in Fig. 6 the number of married persons according to age group and gender was shown.

3.1.2 Number of children

Among the 149 married workers, 60 had 1 child, 49 had 2 children and 40 had 3 children.

3.1.3 Information about workplace and related

The workers of the study area work in the garment industries located in Export Processing Zone (EPZ), *Savar* and *Ashulia*. They worked for 8-8.30 hours/day and in case of overtime they worked for 11-11.30 hours/day.

3.2 Information about housing condition

The housing condition of the garment workers in the study area is discussed here.

3.2.1 Type of housing

Two types of housing were found for the garment workers in this study area:

a) Single housing and
b) Group housing

It was found from the survey that among the 200 workers, 194 garment workers (97%) lived in group housing unit and only 6 workers (3%) live in single housing unit. The housing type of the garment workers in the study area was shown in Fig. 7. Figure 8 showed an example of group housing in the study area.

3.2.2 Room occupancy and population per dwelling unit

It was found from the survey that among 200 workers about 174 of them occupied one room and only 26 garment workers occupied two rooms. In each group housing a minimum of 5 and maximum 35 households (family) lived and the number of persons living in a group housing was minimum 12 and maximum 125. Figure 9 showed the number of room occupancy by the workers.

3.2.3 The size of room

No standard was maintained for the size of room in the houses of garment workers. Most of the garment workers lived with more than 4 family members in the same room. But the size of room was not sufficient to accommodate 4 persons in a single room with all the furniture, household stuffs and so on. Usually the room size varied from 4.6 m - 6.0 m in length and 3.6 m - 5.5 m in width.

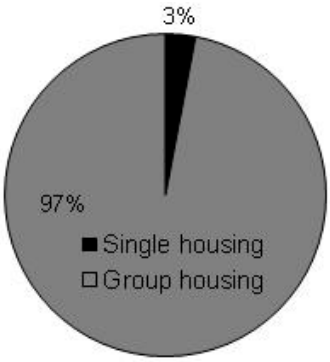

Fig. 7. Types of garment workers housing in the study area.

Fig. 8. Group housing of garment workers in the study area.

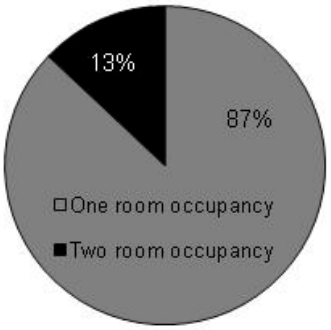

Fig. 9. Number of room occupancy by the workers.

3.2.4 Material of House

It was found that Corrugated Iron (CI) sheet was the main material of house in the study area. Figure 10 and Fig. 11 depicted the housing materials in the study area.

a) Roof: All the houses of the garment workers surveyed in the study area was found with Corrugated Iron sheet roofs.

b) Wall: Among the 200 workers, 106 workers reported that the wall of their houses was made of Corrugated Iron sheets, 64 workers said as made of brick and the remaining 30 stating they had wall made of

bamboo. Figure 12 (a) showed the wall materials used in the houses of garment workers in the study area.

c) Floor: Among 200 workers, 160 workers answered that they had *pucca* floor i.e. concrete/ pavement on the floor and 40 workers mentioned that they had mud floor in their houses. The floor materials used in the houses of garment workers were shown in Fig. 12 (b).

3.2.5 Facilities and utility services

The availability and condition of some facilities and utility services that the workers have in their houses in the study area are discussed here:

Fig. 10. Housing materials used in the study area; Corrugated Iron sheets on roof and walls; mud floor.

Fig. 11. Housing materials used in the study area; Brick walls and pavement on floor.

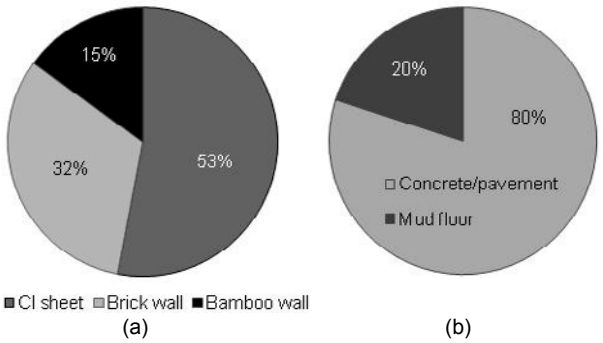

Fig. 12. (a) Wall materials and (b) Floor materials in the houses of garment workers in the study area.

(a) Cooking facility: Table 2 summarized all the related information about cooking facility. It was found from Table 3 that shared kitchen was very common in the study area and 194 garment workers used shared kitchen, whereas only 6 workers used private kitchen. They used three modes of cooking in their kitchen i.e. gas, electricity and wood. Among 200 garment workers 112 had gas supply, 10 used electricity and 78 persons used wood to cook food. Gas users faced a problem related to the pressure of it. It was said that from 10 am to 5 pm the pressure of gas was high as hardly anybody used the gas burner because during this time the workers were in their work place. After this, when the workers came back home and started cooking, the demand of gas was increased but during this time (usually from 5 pm to 10 pm) the supply i.e. the pressure of gas was decreased. The pressure of gas was in moderate level during 10 pm - 10 am. Gas bill was usually paid by the house owner whereas the electricity bill and the cost of wood is paid by the workers. Figure 13 showed the mode of cooking used by the workers in percentage. The photo of a shared kitchen was showed in Fig. 14.

Table 2. Information of cooking facilities.

Type of kitchen: No. of workers	Mode of cooking: No. of workers	Status (Service quality)
Private: 6 Shared: 194	Gas: 112	High pressure of gas: From 10 am to 5 pm = 7 hours Moderate pressure of gas: From 10 pm to 10 am = 12 hours Low pressure of gas: From 5 pm to 10 pm = 5 hours
	Electricity: 10	Electric cooker depends on availability of electric power
	Wood: 78	Wood burner depends on availability of wood

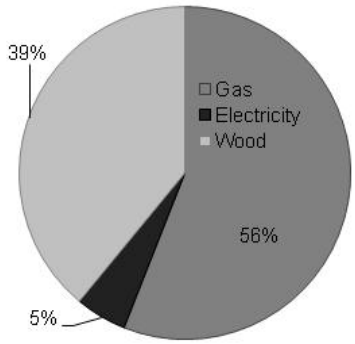

Fig. 13. Mode of cooking used by the workers in the study area.

Fig. 14. Cooking facility (by gas) in a shared kitchen in the study area

(b) Toilet and bathing facility: It was found that among 200 garment workers 196 had shared and only 6 had private toilets and bathrooms. Figure 15 showed the percentage of the types of toilet and bathing facility in the housing of the garment workers in the study area. In Fig. 16 some examples of the toilets and bathing facilities in the workers housing were illustrated.

(c) Water supply: Most of the workers of this area depended on deep tube-well powered by electricity for water supply. Neither the municipal authority nor any other local government body provided water supply facility in the study area. About 154 households (77%) use deep tube well and 46 (23%) depended on hand-operated tube well for water supply in their houses. Figure 17 showed the types of water supply facility and Fig. 18 illustrated the examples of water supply facility.

(d) Electricity: All the workers' houses in the study area had electric connection. The electric bill was paid by the workers. There was a problem of load shedding (interrupted electricity supply) in this area. According to 45% workers there was load shedding on Friday; the only holiday they get in a week and 40% claimed that there was frequent load shedding on the working days at night whereas 5% workers claimed that there was load shedding on both of these time. Actually the distribution network of power was not same in all the houses in the study area.

e) Drainage system: There was no systematic drainage channel in this area, about 30 workers had piped drain, 108 had open drain and 62 had no drainage facility. Figure 19 showed the type of drainage facility (in percentage) available for the workers in the study area. Water logging was one of the major problems faced by

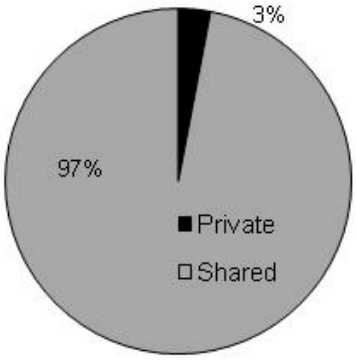

Fig. 15. Types of toilet and bathroom in workers housing.

(a) (b)

Fig. 16. Example of toilet and bathing facility in workers housing; (a) Shared toilets; (b) A combined toilet and bathing facility.

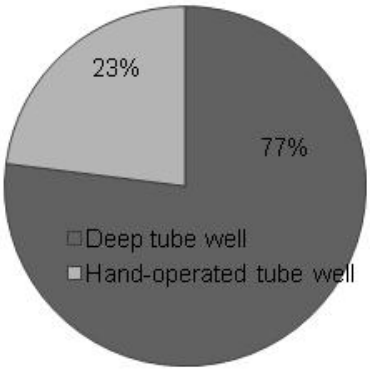

Fig. 17. Types of water supply facility in the study area.

(a) (b)

Fig. 18. Water supply facility in the study area (a) Piped water supply with overhead storage tank from deep tube well (b) Hand-operated tube well.

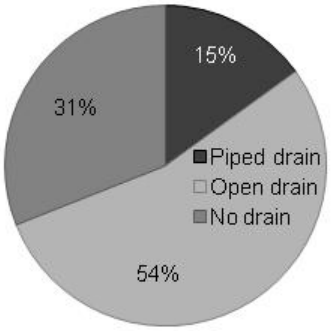

Fig. 19. Types of drainage facility in the study area.

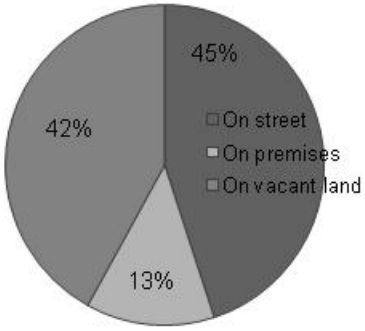

Fig. 20. Solid waste dumping sites in the study area

the residents of this area specially during rainy season. The workers mentioned that the open drains were the birth place of insects like mosquitoes, flies etc. Those insects and mosquitoes spread different types of diseases in the study area.

(f) Solid waste management: There was no authority to manage the solid wastes in this area. Although the area was under a local government jurisdiction *(Pathalia union parishad)* yet it didn't provide any kind of facility for solid waste management. The workers usually threw away the wastes on streets, on the premises and on vacant lands. It is revealed that among the 200 samples, 90 (45%) households threw wastes on the street, 26 (13%) gathered the wastes on the premises and 84 (42%) household threw on the vacant land. Figure 20 showed the workers practice of solid waste dumping in different sites (in percentage) in the study area. These dumping sites pollute the soil, water and air in the study area. These also spread odors in the surrounding areas and generate different types of insects e.g. flies, mosquitoes. In this way, it affected badly on the environment of the study area. Figure 21 displayed the waste dumping situation in the study area.

3.2.6 Other related issues

Other related issues discussed here are about house rent and privacy in the housing area.

(a) House rent: There was no standard of house rent for the garment workers in this area. It was solely determined by the owner of the house. Sometimes it depended on type of housing, room size and availability

Fig. 21. Waste dumping situation in the study area.

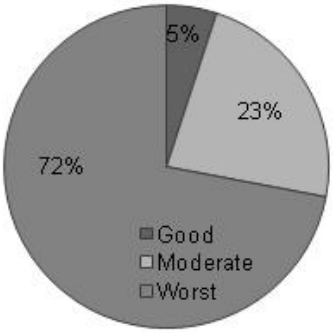

Fig. 22. Level of privacy in workers housing.

of utility services and facilities. For each room in a shared housing the garment workers had to pay the minimum of 1300 BDT (16.70 US$) and the maximum of 1650 BDT (21.19 US$). If a family wanted to rent two rooms then the house rent varied within the range of 2000 BDT (25.69 US$) to 2300 BDT (29.54 US$).

(b) Privacy: The level of privacy was not good in the workers houses. More people in less space decreased the level of privacy and created a sense of insecurity. According to the survey, about 144 workers (72%) told that the level of privacy was worst, 46 of them (23%) told it as moderate and only 10 persons (5%) told it as good. Figure 22 showed the workers opinion regarding level of privacy in the housing.

4. Conclusions

This study has tried to explore the existing housing condition of garment workers in *Savar*, Bangladesh. It was mainly based on questionnaire survey, therefore, adequate qualitative and quantitative data were accumulated reflecting the living condition of the garment workers. The major findings of this study were as follows:

- Most of the garment workers found in the study area were female (63%) and most of the female workers were found married (80%). Among the male workers 65% were found married.
- Most of the workers (76) were within the age group of 20 to 25 years. Most of the workers (67) within this age group were married.
- All the married workers found in this study (149) had child. Among them 60 had 1 child, 49 had 2 children and 40 had 3 children.

- Group housing was very common for the workers in the study area. 97% of the workers lived in this type of housing. The remaining (3%) lived in single housing.
- Most of the workers (87%) occupied only one room and the remaining (13%) occupied two rooms.
- In each group housing a minimum of 5 and maximum 35 households (family) lived and the number of persons living in a group housing was minimum 12 and maximum 125.
- There was no standard of room size in the houses of garment workers. Usually the size of room varied 4.6 m - 6.0 m in length and 3.6 m - 5.5 m in width. However, the room size was not sufficient to accommodate a family of 4 persons.
- Corrugated Iron (CI) sheet was the main material of house in the study area. The roof of all houses surveyed were made of CI sheet. Moreover, the wall of 53% houses was made of CI sheets. The wall of remaining 32% houses was made of brick and 15% of that was made of bamboo. The floor of 80% houses was made of concrete/ pavement and the remaining (20%) is mud floor.
- Shared kitchen was very common in the houses of garment workers and all the group housing provided this type of kitchen. Only the six single housing provides private kitchen. Most of the garment workers (56%) used gas for cooking, 39% of them used wood and only 5% used electricity to cook food. Gas bill was usually paid by the house owner whereas the electricity bill and the cost of wood was paid by the workers.
- Group housing provided shared toilet and bathing facility and only the single housing provided private toilet and bathroom for the workers.
- Most of the workers (77%) depended on deep tube well powered by electricity and remaining 23% depended on hand-operated tube well for water supply in their houses.
- All the workers' houses in the study area had electricity. The electric bill was paid by them. However, they faced the problem of frequent load shedding in this area.
- There was no systematic drainage channel in this area. Only 15% workers had piped drain, 54% had open drain and 31% had no drainage facility.
- There was no authority to manage the solid wastes in this area. The workers usually threw away the wastes on streets (45%), on the premises (13%) and on vacant lands (42%).
- The dumping sites of solid waste pollute the soil, water and air in the study area. These also spread odors in the surrounding areas and generate different types of insects e.g. flies, mosquitoes. As a result, it affected badly on the environment of the study area.
- More people in less space decreased privacy in the workers housing. 72% of workers claimed that the level of privacy was the worst, 23% claiming it was moderate and only 5% stating it was good.

More than 78% of Bangladesh's export earnings come from the garment industry. This sector has a greater potential to reduce poverty and make a contribution to the national economy. In fact, the garment workers mostly are rural migrants and inexperienced in urban life. They are not concerned about the facilities they should have along with adequate housing and they suppose to be happy with what they had. The improved housing with proper arrangement of facilities and utility services will certainly upgrade the living standard of the garment workers in the study area. In the future housing policy of the country these issues should be properly addressed.

References

Alam M. J., Mamun, M. Z. and Islam, N. 2004. Workplace Security of Female Garments Workers in Bangladesh. Social Science Review, **21** (2): 191-200.

Bangladesh Garment Manufacturers and Exporters Association (BGMEA), Bangladesh. 2015. http://www.bgmea.com.bd/chart/factory_growth_in_bangladesh. Accessed on 14/12/2015.

Bangladesh Bureau of Statistics (BBS). 2011. http://www.bbs.gov.bd/Census2011/Dhaka/Dhaka/Dhaka_C01.pdf., Accessed on 14/12/2015.

Dasgupta, S. 2002. Attitudes towards Trade Unions in Bangladesh, Brazil, Hungary and Tanzania, International Labour Review, **141** (4): 413-440.

Knowles, M. 1920. *Industrial Housing.* New York: McGraw-Hill, USA.

Mariani, R. D. and Valenti, F. 2015. Working conditions in the Bangladeshi garment sector: Social dialogue and compliance, http://www.fairwear.org/ul/cms/fck-uploaded/documents/countrystudies/bangladesh/WorkingconditionsintheBangladeshigarmentsectorSocialdialogueandcompliance.pdf.Accessed on 18/10/2015.

National Housing Authority (NHA), Bangladesh. 2015. National Housing Policy 2008, http://www.nha.gov.bd/pdf/national_housing_policy_(rough).pdf, Accessed on 18/11/2015.

Saifullah, M. 2013. Lifestyle of garment soldiers: In the camera of Taslima Akter. The Daily Prothom Alo, Dated: 18 May, 2013, pp.25-26.