

HEALTH AND OCCUPATIONAL SAFETY FOR FEMALE WORKFORCE OF GARMENT INDUSTRIES IN BANGLADESH

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Abstract: It is the advantage to outsourcing of supply chains that opened up a new door of economic emancipation for Bangladesh. The readymade garments (RMG) of Bangladesh emerge as value chain member of European, USA cloth merchants and retails. Many of them are found economic justification in outsourcing production function to Bangladesh. RMG sector of Bangladesh responded to this outsourcing demand quite successfully. The overwhelming success of the RMG sector of Bangladesh has moved its status in the global context in terms of economic and social development indicators. Despite the challenge that lies ahead, Bangladesh performed well in terms of realizing benefit of economic globalization, particularly its RMG sector. This paper discusses in brief the problem of health and safety issues of female workforce of garment industries in Bangladesh based upon the industry environment, their residential environment, working condition, age, problem of health, causes of diseases, causes of fire accident and their medical facilities.

Key Words: Female Workers, Health, Disease, Fire and Safety.

INTRODUCTION

The 1980s mark the beginning of the rapid integration of Bangladesh's a small and open home based garment industry into global garment chain as a result of liberalization of the economy. At present the readymade garment industry (RMG) is a highly globalize industry [1]. In most countries, particularly in developed countries, including U.K and other European countries and the U.S.A, Canada and Japan, not only textile but also apparel industry was developed in response to domestic demand. But in case of Bangladesh, domestic demand was to little to attract large-scale investment. It was the global market that created an environment congenial to the growth and development of garment industry in Bangladesh. Therefore, to produce a garment production, activities are undertaken in a number of stages in a variety of locations, adding value at each stage within the framework of trade system. Pratima Paul-Majumder and Anwara Begum in their paper discuss the gender imbalance in the export garment industries in Bangladesh [2]. It evaluates gender difference in conditions of employment and the work environment, and looked at differences among export-oriented garment industry, other export industries and non-export industries. Naila Kabeer and Simeen Mahmud in their paper discusses the nature of female workers contracts and their terms and conditions, their rights & restructuring processes of garment industries [3]. The

paper titled "Globalization and Bangladesh-A Discussion on Bangladesh's Garment Industry" was about globalization & Bangladesh garment industries. The paper how globalization affects the garment industries has been highlighted in this paper [4]. The problem of health and safety issues of female workforce in garment industries of Bangladesh is now very important regarding international workplace norms in the International Labour Organization (ILO) conventions and the UN's Universal Declaration of Human Rights.

LITERATURE REVIEW

Pratima Paul-Majumder and Anwara Begum in their paper discuss the gender imbalance in the export garment industries in Bangladesh [2]. It evaluates gender difference in conditions of employment and the work environment, and looked at differences among export-oriented garment industry, other export industries and non-export industries. Naila Kabeer and Simeen Mahmud in their paper discusses the nature of female workers contracts and their terms and conditions, their rights & restructuring processes of garment industries [3]. The paper titled "Globalization and Bangladesh-A Discussion on Bangladesh's Garment Industry" was about globalization & Bangladesh garment industries. The paper discussed how globalization affects the garment industries has been highlighted in this paper

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OBJECTIVE OF THE RESEARCH

This study was conducted on 20 selected garment industries of different categories located mainly in Dhaka city in the beginning of 2008. In this study, variables were considered as per the research objectives. The research objectives were to find out the health and safety issues of female workers of garment industries in Bangladesh. To improve the overall production of garment industries, developing female workers health and safety issues are the main factors.

RESEARCH METHODOLOGY

In this study, variables such as problem of health, industry environment, age, living condition, salary structure, job section, workers job type, working hours etc. were taken into consideration. Several workers of different sections in garment industries were called upon to deliver relevant information mainly causes of health problem and safety issues in this occupation.

The following sections cover the steps involved in this research study.

Step 1: Conducting Primary Survey: A primary survey was conducted to have a clear conception on the project area in order to develop a format with variables of interest.

Step 2: Preparing Primary Questionnaire: Based on the primary survey and the knowledge gathered from the literature, questionnaire was prepared. It was checked to ensure its validity.

Step 3: Verifying and Finalizing the Questionnaire: A necessary modification was made before finalizing questionnaire as per the objectives of study.

Step 4: Data Collection

Questionnaire: Based on questionnaire, data on the variables for twenty garment industries were collected. These steps also included diagnostic interviews with the management level and the individuals respectively to gather some other relevant information regarding health and safety issues.

Step 5: Data Processing and Analysis: For the analysis of data, SPSS (Statistical Program for Social Science) was used in the personal computer to work out the cross tabulation and frequency distribution between related fields based on Pearson Chi-Square Value.

DATA ANALYSIS

A cross-sectional descriptive type of study was conducted at the beginning of 2008. During data

collection twenty garment industries around Dhaka, Chittagonj and Narayanganj were visited and 300 female workers of different sections were asked questions. The data were collected from January 2008 to March 2008 using the prescribed format. The analyses of data with discussion are given below:

Table 1 below shows that as per Pearson Chi Square test values for all variables are significant.

Table 1: Pearson Chi Square test for related variables.

Variables	P -value
health problem & wages category	.035
description of residence & health problem	.005
age category & health problem	.035

Table 2 Cross tabulation for health problem and wages category of female workers.

health problem for female worker by factory environment	wages category for female worker*		Total
	1	2	
no problem	3	24	27
asthma	15	24	39
Back pain	6	48	54
upper back pain	0	36	36
Eye problem	6	24	30
headache	18	36	54
allergy	24	24	48
others	6	6	12
Total	78	222	300

*Female workers wages category 1=0-1499; lowest wage earner group and 2=1500-highest; highest wage earner group

From table 2 it is seen that back pain for category 2 is 48 which is the highest among all categories. Both upper back pain and headache is the next highest among all workers. It is also found that no upper back pain for wage category 1.

General Health Care System in Bangladesh

Taking into consideration of the vast population sizes, Bangladesh's population is presently estimated to be 139 million growing @ 1.6% per annum [5]. The health sector is not keeping pace with the growing population due to the insufficient production of key health providers like Doctors, Dental Surgeons, Nurses and Public Health Professionals at various strata of the health sector in Bangladesh. Rural urban difference in HR distribution reveals the extents of disparity between HR distributions, for example, now Doctor to population ratio is 1:1500 in urban areas and 1:15000 in rural areas. All dental

surgeons and nurses work in urban areas, which is the same like the other health service providers. There is one hospital bed for every 10,000 population (ratio stands at 1:10,000) [6]. The country lacks till to date adequate network for health care infrastructure. The trend with regard to health provider and population ratio in the present health care system can be seen from Table 4 shown below.

Table 3: Population ratio in the present health care system of Bangladesh

No.	Health Providers	Ratio
1	Doctor-population ratio	1:4645
2	Nurses-population ratio	1:7788
3	Doctor-nurses ratio	1:06
4	Medical assistance ratio	1:28,443

Most of the female workers suffer from acute shortage of medicine. Female workers patient need to buy medicine from market that is costly for low paid female workers. The above scenario supports the UNDP finding that only 45% of the population of Bangladesh has access to primary health care services [7].

Health Care System for the Female Work Force Employed in Garment Industries

Female force engaged in the garment industries in all types of knitwear, woven and sweaters, are generally suffer from male nutrition, anemia, gastric, dysentery, diarrhea, respiratory problem, gynecological problems, tuberculosis and urine infection etc. (community diseases are not covered in this study due to some practical constraints). Moreover, gender equity status and existing disparity; indeed, practically depriving female workers from the public health care system. Garments workers are working in the urban center and live around the slums of urban and semi urban areas. It is natural that when workers are sick, they are to go to the public hospital. They cannot effort to receive health care from private clinics. On the other hand, they are even not able to get proper health care from public hospitals. It is very difficult for a female worker to get admitted in the public hospital unless she spends a good amount of money through broker and corrupt officials. Thus health care in public sector is also quite costly for low paid female workers. As a result, more than 87% female workers suffer from different types of ailments and diseases. Married female workers suffer from various problems. They do not get maternity leave with pay for more than 30 days, in some cases maximum 60 days. These pregnant female workers suffer from malnutrition, anemia, along with other

complications. But they do not have access to proper health care for this kind of ailments. At the same time, they face serious problem to feed her and support the family. Female workers who have this kind of health problem are compelled to go to the village home, as because they are not in a position to live in the city, since they do not earn at the period, it is difficult for them to bear expenses in two places i.e. in mess and in village home. In the rural areas, they do not get any specialist or even a trained nurse to consult and avail health service [6]. As a result, they are bound to go to half trained midwife or village quack. Due to lack of antenatal and postnatal checkup, they usually do not take care of malnutrition and vitamin.

Table 4: Frequency distribution for female worker’s medical facilities

	Frequency	Percent
Valid not at all	39	13.0
do not know	129	43.0
first aid	132	44.0
Total	300	100.0

Table 4 shows the frequency distribution for female worker’s medical facilities percentage of information about medical facilities. From table 6 it is found that 129 female workers have no idea about medical facilities; according to 39 female workers interview there is no medical facilities within their factories.

Different Types of Diseases

Most of female workers (over 85% female workers) suffer from malnutrition, ill health, reproductive health problem and various community diseases, which they cannot address with low income. In garment industries, generally maternity leave is for 30 days and maximum 60 days. But Govt. rule of maternity leave is 04 (Four) months with pay. Pregnant female workers suffer from malnutrition and anemia along with other serious complication.

Residential Environmental

Female workers of the Garment Industries in Bangladesh live in slum and semi-slum in urban areas of the 3 cities where garment industries are concentrated. They face many problems like proper sanitation facilities, safe drinking water and undisturbed electricity etc. (illegal connection). Use kerosene light combining mostly 3-6 female workers live together. They hire one or one and half room space. 2.5 million female workers are fueling the wheel of the economy by their participation in RMG sector.

Table 5: Cross tabulation for residence and health problem of female workers

			health problem for female workers by factory environment								Total
			no problem	asthma	Back pain	upper back pain	eye problem	headache	allergy	others	
description of residence of female worker	brick built	Count % of Total	3 1.0%	0 .0%	12 4.0%	6 2.0%	0 .0%	6 2.0%	0 .0%	0 .0%	27 9.0%
	semi slum	Count % of Total	21 7.0%	9 3.0%	30 10.0%	15 5.0%	15 5.0%	15 5.0%	6 2.0%	9 3.0%	120 40.0%
	slum	Count % of Total	3 1.0%	30 10.0%	12 4.0%	15 5.0%	15 5.0%	33 11.0%	42 14.0%	3 1.0%	153 51.0%
Total		Count	27	39	54	36	30	54	48	12	100

From table 5 it is found that most of the female workers lives in slum (51%), 40% female workers lives in semi-slum and 9% female workers lives in brick build house. Slum and semi-slum is very

Unhygienic to live at all. Our survey found that those who live in both slum and semi slum residence mostly suffer from community diseases also.

Table 6: Cross tabulation for age category and health problem of female workers.

			health problem for female worker by factory environment								Total
			no problem	asthma	Back pain	upper back pain	eye problem	headache	allergy	others	
age category of female worker*	1	Count	12	24	12	9	9	39	30	6	141
	2	Count	15	12	33	15	12	9	9	0	105
	3	Count	0	0	9	9	9	6	9	3	45
	4	Count	0	3	0	3	0	0	0	0	3
Total		Count	27	39	54	36	30	54	48	12	300

* Female workers age category 1=16-20, 2=21-25, 3=26-30 and 4=31-35

Table 6 shows that health condition of female workers in age category 1(16-20 years) and 2 (21-25 years) are the most suffered one.

INDUSTRY ENVIRONMENT FOR FEMALE WORKFORCE OF GARMENT INDUSTRIES

Garment industry in Bangladesh can be successful for a very short time by developing work environment of female workforce but if they have not planned and implemented some very essential health and safety rules that industry will suffer and eventually close. Legal requirement of industry act has to be ensued properly like cleanliness, disposal of wastes and effluents, ventilation and temperature, dust and fumes, artificial humidification,

overcrowding, lighting, drinking water, latrines and urinals, spittoons, working place etc. Good work environment can protect many small and big injuries for female workforce that arises within the industry. Very few garment industries in Bangladesh take necessary steps to ensure above-mentioned legal requirement. As a result most of female workforce feels lot of problem in their work place. For this reason management must ensure that their industry meets basic standards because providing some minimal facilities could make big differences in worker productivity and health.

SAFETY ISSUES FOR FEMALE WORKFORCE IN GARMENT INDUSTRIES

Safety issues deal with all types of situations that arise in a industry. In most cases the safety issues is easily identified and corrected. Situations such as emergency exits being blocked can be readily cleared and kept cleared. Other situations require reactions that are planned well ahead of time and practiced. Management has to coordinate a large number of female workforces to effectively respond to an emergency. Situations such as major fire will require a practiced emergency response. In emergency situation large group of people panic easily unless they are well prepared. Workers especially female workers are less secure as monetary remunerations are never beyond just enough, sometimes even less. In fact, workers' lives are apparently so insignificant that the death of garment workers is soon forgotten, until of course the next strategy.

Causes of Fire Accidents in Garment Industries

Garments and fire are closely related to each other in Bangladesh. Causes of fire accidents in garment industries, problems that are created by unplanned work environment, disorganized workers, electric short circuit, faulty electrical wiring, smoking materials, boiler explosion, kitchen stove and carelessness, fire from existing structure, poor building design and largely due to the lack of concern of industry-owners on this issue. More importantly industry management are found to be totally unaware of the need and importance of the means of escape, the route to escape from the effected area to a place of safety or a place of refuge in case of fire. Most of the deaths and injuries are caused by locked and/or inadequate means of escape in such factories. But the

cause of death is usually not the fire directly. Most of workers have died due to stampede, locked exit route, inadequate number of stairs, deliberately blocked pathways, smoke and suffocation in short their inability to escape (see table 7).

Safety Issues in the Outside of Garment Industries

Safety issues are related to the outside situations also. In Bangladesh buildings are closely spaced that if one building accidentally catches fire, it is possible that the building beside the affected one may also catch fire. Most of garment industries are established in residential and commercial areas, which is not like in concept of industrial area. On the other hand fire fighters face many problems due to this inadequate set back between buildings.

First Aid Treatment in Garment Industries

In our survey we found that most of garment industries has no designated first aid sections clearly marked. But this section should have well stocked cabinet of medicines and bandage because many small accidents in garment industries can be dealt with immediately. Several staff both male and female should be trained in basic first aid treatment and it is ensured to present in every shift especially at night.

Fire Accidents in Garment Industries

Since 1990, over 350 workers have died and some 1500 injuries in fire related incidents in garments industries in Bangladesh. Till 2000, there were more than hundred fires in industries in Bangladesh. More than 5000 workers were killed. Table 8 shows that some recent fire accidents in garments factories in Bangladesh. Data shows in table 8 indicate the casualties of workers in garment industries due to fire. It is seen from the dead column in table 10 that workers of both sexes are the casualties of fire.

Table 7: Recent fire accidents in garments factories in Bangladesh [8].

Date	Place	Dead	Injured	Cause of Fire	Cause of Death
23.02.06	KTS Textiles, Chittagong	91	400	Electric short circuit	Only exit locked, fire suffocation, stampede
06.03.06	Industry at Gazipur	3	---	Fire panic	Stampede
Mar. 06	Salem Fashion Wear Ltd.	3	50	Unknown	Only exit was blocked by boxes, smoke and stampede
03.05. 04	Misco Super Market, Dhaka	9	50	False fire alarm	Stampede
01.08.01	Kafrul	26	76	Unknown	Smoke and stampede
08.08. 01	Mico Sweater Ltd. Mirpur	28	100	Unknown	Single exit locked
2000	Near the Capital	48	70	Boiler burst	Trapped in locked burning industry
2000	Chowdhury Knitwear, Norshingdi	53	100	Short Circuit	Fire, smoke and stampede
28.08.00	A garment in Banani	12	45	Unknown	Suffocation, stampede

Problems of Improvement of Fire Safety in Garment Industries

Analyzing the past incidents and accidents, some terrible facts are revealed. But in most cases people died, because of very poor fire safety management

system. Our recent survey of garment industries in some particular industrial area in Dhaka found that industry owners are now much more concerned about fire safety. Most of the industries ensured proper installation, arrangements and training of the safety

equipments such as fire alarm, smoke alarm, fire extinguishers, water supply system etc. but installations, fire signage and fire drills are not enough in a sense that if planning of the building is not proper; it can lead to serve tragedy. Plan layout is greatly responsible for the deaths of workers while means of escape comes into question. Faulty route of escape often is probably the main cause of death in industries in Bangladesh.

FINDINGS

For Health

(i) Not enough congenial and hygienic working atmospheres in industry (ii) Sexual harassment by lineman, supervisor and manager to the female workers (iii) Not enough toilet and washroom facilities (iv) Pure water is not available for drinking and washing for female workers (v) Discrimination in wages fixation and other facilities between male & female workers (vi) Not enough maternity leave for female workers. If so, then without pay (vii) No weekly holiday for female workers. If so, then without pay (viii) No recreation facilities for workers (ix) No baby care center for female workers.

For Safety

(i) Management is not aware enough for safety and physical comfort of female workers (ii) In human activities by the security guard to the female workers [9] (iii) Not enough fire exit doors and ventilation for air circulation of industry building [10] (iv) The management offers no appointment letter for any kinds of worker (v) It is found that most of the garment industries do not use safety sign according to the ILO conventions (vi) Most of the fire and smoke alarm bells does not work in garment industries and (vii) Many garment industries does not have fire and smoke alarm systems.

RECOMMENDATIONS

(i) Sufficient widen fire exit doors and enough ventilation with proper maintenance for air circulation should be designed for industry building (ii) Regular fire drills should be held, minimum twice in a year (iii) More toilet facilities for female workers (iv) Pure water supply for drinking and washing for female workers (v) Fulltime medical care and first aid treatment with female doctor and highly trained nurses for female workers (vi) Safety management training for all kinds of worker (vii) Maternity leave & weekly holiday with pay for female workers (viii) Fixation of wages should equal and logical for male and female workers based on living standard (ix) Management should issues appointment latter for all kinds of workers as certainty of their job (x) Management should permit to arrange trade union by law (xi) Proper exit sign and safety sign should be applied in appropriate areas of the industry (xii) All the buildings of garment industries should have proper announcement system as to how to get out of

the building (xiii) Management has to provide basic legal requirements to ensure a healthy industry etc.

CONCLUSIONS

Large- scale entry of women into the labour market has been one of the most striking features of recent industrialization in Bangladesh. The growth rate of RMG sector over the last decade was almost 25%; in the 1990s the sector has registered an average growth rate of about 20%. Creation of employment opportunities, mainly for the women constituting about 90% of the sectors workforce has been a striking feature of the rapid expansion of the RMG sector in Bangladesh. Rising public concern about inhuman working conditions in developing countries led to the creation of the Council of Economic Priorities Accreditation Agency in 1997. A conscious public policy package aimed at encouraging skill development, facilitating technology transfer and raising of the productivity level of female workers thus needs to be put in place to translate Bangladesh's comparative advantage into competitive advantage.

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