

Health Status of the Female Workers in the Garment Sector of Bangladesh

Shaheen AHMED

*Corresponding Author, School of Business, Bangladesh Open University, Bangladesh,
shaheenmahmed@yahoo.com*

Mohammad Zahir RAIHAN

School of Business, Bangladesh Open University, Bangladesh, raihan_bou@yahoo.com

Abstract

Readymade Garment (RMG) Sector in Bangladesh has been playing a vital role in creating employment opportunity for the rural marginal people for the last two decades. At present 5,100 garment factories are operating in this country and 3.6 million workers are working there in which more than 80 percent of them are female. From the beginning it is largely apparent that the health status of the female garment workers is not well enough to do their work properly. Keeping this in mind, the study was conducted to find out the health status of the female workers. In this study, 200 female workers of Bangladesh were interviewed to identify the major diseases they experienced. The study reveals that the majority of the female workers in the garment sector suffer from the diseases like problems in bones, abortion complexity, dermatitis, back pain, eye stain, pruritus, malnutrition, respiratory problems, hepatitis (Jandice), gastric pain, fatigue, fever, abdomen pain, common cold, and helminthiasis. The policy makers and other concern bodies should take necessary measures to ensure good health of the garment workers. It will help female workers to be more productive and their contribution to the country will be enhanced.

Keywords: Diseases, Garment Sector, Health Hazard, Health Status, Safety Measures.

JEL Classification Codes: Y80.

Bangladeş'teki Hazır Giyim Sektörü'nde Çalışan Bayan İşçilerin Sağlık Durumları *

Öz

Son 20 yıldan beri Bangladeş'teki Hazır Giyim Sektörü, köylü ve eğitim seviyesi düşük insanlar için iş istihdamı sağlamada önemli bir rol oynamaktadır. Günümüzdeki 5,100 sayıda giyim fabrikası bu ülkede faaliyet göstermekte ve %80'den fazla kadın işçiyi kapsayan 3.6 milyon çalışana da bu fabrikalar iş imkanı sağlamaktadır. Başlangıçtan beri yetersiz sağlık durumlarından dolayı kadın tekstil işçilerinin sağlık statüleri işlerini tam olarak icra edebilmeleri için yeterli değildir. Bu durum göz önünde bulundurulduğunda, bu çalışma kadın çalışanların sağlık statülerine dair verileri bulmak üzerine hazırlanmıştır. Bu çalışmada Bangladeşli 200 kadın çalışanın geçirmiş oldukları ana hastalıkları saptayabilmek için mülakat yöntemi kullanılmıştır. Bu çalışma hazır giyim sektöründe çalışan kadın işçilerin çoğunluğunun heminthiasis, soğuk algınlığı, karın ağrısı, ateş, yorgunluk, mide ağrısı, hepatit (Jandice), solunum problemleri, yetersiz beslenme, kaşıntı, bel ağrısı, göz lekesi, deri iltihabı, (zorlu) kürtaj ve kemiklerde problemler gibi sağlık sorunlarından muzdarip olduğunu ortaya koymaktadır. Politikacıların ve diğer ilgili kurumların hazır giyim sektöründe çalışan işçilerin sağlıklarını korumak adına gerekli önlemleri almaları gerekmektedir. Bu sayede bayan çalışanların işyerinde daha verimli olmalarına katkı sağlayacak ve onların ülkeye olan katkıları da böylelikle artmış olacaktır.

Anahtar Kelimeler: Hastalıklar, Hazır Giyim Sektörü, Sağlık Sorunu, Sağlık Durumları, Güvenlik Önlemleri.

JEL Sınıflandırma Kodları: Y80.

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1. Introduction

Readymade Garment (RMG) Sector is the main source of earning foreign currencies in the economy of Bangladesh. In 2010–2011 financial year 78.15 percent of the total income was from the garment sector. At present 5,100 garment factories are operating in this country and 3.6 million workers are working in this sector (EPB 2012) where more than 80% of them are female who mainly came from the rural areas of Bangladesh. It plays an important role in generating employment opportunities for the rural illiterate women otherwise they had to work as maid servant. Therefore, RMG sector opened a new door for rural people to engage themselves into the economic activities of Bangladesh.

The workers in this sector are living from hand to mouth and they are unable to maintain their basic needs from their income. They cannot afford to maintain minimum health care, medical services, hygienic accommodation as well as access to other amenities is a dream to them. So they had to suffer from different types of physical complexity. In addition to this, the working environment of the garment factories is not congenial to ensure good health. Furthermore, garment workers are frustrated about their future due to less earning which also affect on their mental and social stability. According to WHO (1948), “Health is a state of complete physical, mental and social wellbeing and not merely the absence of diseases or infirmity”. But Bangladeshi garment workers are unable to maintain any of the health condition prescribed by the WHO.

The garment worker in Bangladesh had to work from dawn to dusk in a confined environment where proper ventilation of air is absent. For this, they are affected by the disease bearing virus and bacteria that cause various types of diseases in their bodies. The most of the owners of the garment factories are found completely reluctant. N Nahar, R N Ali and F Begum (February, 2010) found that work pattern in the garment factory severely affected worker’s health, as they were restrained in a closed environment. In their study they concluded that the particular nature of work in garments create various types of health hazards among the garment workers such as headache, malnutrition, musculoskeletal pain, eye strain, less appetite, chest pain, fainting, diarrhoea, hepatitis (jaundice), food poisoning, asthma, fungal infection, helminthiasis, dermatitis. In these circumstances Jana P (2008) suggested that recognizing ergonomic risk factors in the workplace is an essential first step in correcting hazards and improving worker protection.

The female workers in the garment sector mainly stitch up the fabrics. Therefore, they had to inhale dust of fabric causing health hazard and ultimately suffer from the diseases like asthma, respiratory problem, breathing problem, conjunctivitis and visual discomfort. In addition to this, they had to work for a long period without movement from their desk. Due to the nature of job the back pain is a common phenomenon to the majority of female workers. They also suffer from

neck pain, joint pain, musculoskeletal pain, neural problem and problem in body muscles, joint, tendons, ligaments and bones. Paul-Majumder & Begum (1997) showed that within the garment factories women worked in the low-skilled jobs of operator and helper, where health hazards were high. In these jobs they had to continuously inhale toxic substances emitted from dye used in colored fabric as well as dust and small particles of fiber. Mehta, R. (2012) showed a statistics of how many workers were suffering from diseases in stitching section which provide a general idea about the health status of the workers. The study proved that majority of workers (55%) complained about musculoskeletal problem. This was followed by neural problem such as headache (40%), respiratory (30%), skin problem (13%), numbness of hands and fingers (8%), hearing (5%) and visual discomfort (2%).

According to the Drusilla, Alan & Robert (2011), hazardous conditions of work range from the exposure to lint dust in an apparel factory to exposure to toxic chemicals in the recycling of electronic waste. It is also evident from the study of Mehta (2012) that the musculoskeletal disorders are the most common work related problems. It affects the body muscles, joints, tendons, ligaments, bones and nerves. The monotonous work lead to increased worker fatigue due to continuous handling of loads, prolonged standing, repetitive movement of both hands and wrists and awkward postures.

The female workers in the garment sector are always under heavy working pressure in their factories. They are to fulfill their work target each day; otherwise they are penalized. Therefore, they pass their time with workload and mental pressure. For this reason, workers in the garment factory suffer from different types of diseases and illness like: headache, fainting, eye stain, cut injury, fatigue, frustration, heart disease and so on. Alam (AFP, 2009) found in his study that excessive workload and mental pressure at the workplace increased the health problems and medical expenses. On the other hand, Jana (2008) discovered that due to excessive workload and awkward postures, forceful exertions, repetitive motion, and heavy lifting workers may have exposure to undue physical stress, strain, and overexertion, including vibration.

The income level of the female workers in the garment sector is very poor. Actually the workers cannot fulfill their basic requirements with their income; even they cannot buy balanced and fresh food to survive. So they always suffer from malnutrition, diarrhoea, dysentery, less appetite, food poisoning, pain in abdomen, and gastric pain. Bheda (2004) argued that most of the health problems that the garment workers suffered arose from the occupational hazards including long working hours, absence of leave facilities, congested and over-crowded working conditions, absence of health facilities and safety measures, absence of staff amenities, lack of safe drinking water etc.

In the garment factory female workers have to work in a noisy environment. Mehta (2012), Hearing disability was attributed due to noise from the machines and when numbers of sewing machines are compounded it makes the environment noisy for the workers. The improper selection of lighting fixtures and their placements further contributes to neural problems. The dust and loose fibers lead to respiratory problems. Piercing of fingers is one of the most common occurring accidents. It was observed that none of the workers used thimble. It was also observed that the machines were not properly maintained resulting in hand arm vibration. This leads to fatigue, pain, numbness and tingling of fingers and arms and headache. He also added that in the quality section, there is a lot of stress on the eyes leading to headache and visual discomfort. Working in humid conditions, that arise from steam ironing causes respiratory problems such as asthma and breathing difficulty and due to excessive noise the workers experience a common problem of hearing.

Female workers in the garment factories sometime have to work over night at the time of shipment or when excessive work order received by the factory. Most of the factories do not have separate rest room for the female. As female and male workers work together at the same place caused unwanted physical contact. Sometime it is also evident that female workers have been sexually harassed by the supervisors or male workers in the garment factory. Therefore, female workers suffer from different types of sexual diseases. Moreover, the garment owners do not want to give job or reluctant to continue the job of female workers when they become pregnant or came to know of having their baby. For this reason, when a female worker became pregnant she do abortion to retain job that results in poor health condition. According to Paul-Majumder (1998) the rate of miscarriage among garments workers is very high and most of them experience abortions more than once. Paul-Majumder (1998) also found that female garments workers face an embargo on having babies because of fear of loosing the job. Although having a baby is a human right but they are denied of it.

Dunn & Mondal (2010) in a study find that employers and policy makers generally do not recognize occupational safety and health as a priority. National discussion about OSH issues tends to arise only in response to major industrial accidents. Bangladesh has not ratified the core Occupational Safety and Health Convention (No. 155). The Labor Act provides the opportunity for workers, their families and trade unions to file court cases for compensation in the event of work-related accidents and diseases. Knowledge about occupational diseases and the capacity to pursue legal authority is very limited, however, and the labor court system is weak.

Keeping the importance of garment sector the in the context of Bangladesh in mind, this study was conducted to assess the health status of the female workers in the readymade garment sector of Bangladesh.

The main objective of the study is to explore the health status of the female garment workers in Bangladesh. In addition to this the study has been secured some other objectives like:

1. To identify the major diseases the female workers generally experience in the garment sector of Bangladesh;
2. To identify the relationship between disease of the female garment workers and the overall health status of the female workers in the garment industry of Bangladesh; and finally
3. To put some recommendations to overcome the health problems of the female garment workers.

2. Materials and Method

This is an empirical study that used both primary and secondary data. Primary data were collected from the female workers of 15 leading garment factories of Bangladesh situated at Gazipur and Savar of Dhaka district. In this study, 200 female workers were interviewed to collect data regarding their health status. The average age of the respondent female workers was 26 years with standard deviation 5.583 and their average work experience is 4.07 years with standard deviation 1.869 in the garment factories of Bangladesh. A structured questionnaire with 52 items was used to collect data. The secondary data were collected from the journals, periodicals, annual reports of Bangladesh Garment Manufacturers and Exporters Association (BGMEA) etc.

After collecting data, incomplete, and biased, or abnormally answered data were discarded through a thorough scrutinizing process. The reliability of 52 items in the questionnaire has been tested by using SPSS software and the Alpha Coefficient is 0.9453 which is within the acceptable limit as per Nunnally (1967 & 1978).

Both descriptive and inferential analyses were done with the survey data. Descriptive statistics like mean, standard deviation, simple percentages were used describe the present situation of the readymade garment companies of Bangladesh. Inferential statistics like Factor Analysis (FA) was used to separate the diseases the female garment workers are experiencing in Bangladesh. In this study, Multiple Regression Analysis (MRA) was used to identify the significant diseases from the diseases through factor analysis. The overall health status of the readymade garment workers were defined by their socio-economic status in the garment sector of Bangladesh.

3. Results and Discussion

The results of the study were presented and discussed in this section.

3.1. Health Status of the Garment Workers

This study has identified, through the factor analysis, 15 diseases that are responsible for the overall health status of the female workers in the garment sector of Bangladesh. The factors together explain 69.367 percent of the variance. The most important disease or health hazard of the female garment workers is the problems in their bones with eigenvalue of 14.953 and variance of 28.756 percent. The second important health hazard of the garments workers is the health complexity due to abortion with of eigenvalue 2.496 followed by dermatitis (2.242), back pain (1.987), eye stain (1.751), pruritus (1.6), malnutrition (1.488), respiratory problems (1.434), hepatitis (1.323), gastric pain (1.232), fatigue (1.219), fever (1.161), abdomen pain (1.105), common cold (1.062), and, helminthiasis (1.019). The analysis also reveals that the communalities of the variables are high which indicate the higher level of relationship among the variables.

Table 1: Total Variance Explained

Sl no.	Variables	% of Health Problems	Initial Eigenvalues		
			Total	% of Variance	Cumulative %
1	Problems in bones	57.0	14.953	28.756	28.756
2	Abortion due to retain job	35.5	2.496	4.799	33.555
3	Dermatitis	57.0	2.242	4.311	37.866
4	Back pain	68.5	1.987	3.821	41.687
5	Eye stain	56.5	1.751	3.367	45.053
6	Pruritus	59.0	1.600	3.077	48.130
7	Malnutrition	65.5	1.488	2.862	50.993
8	Respiratory problems	46.0	1.434	2.758	53.751
9	Hepatitis (Jandice)	51.5	1.323	2.544	56.295
10	Gastric pain	71.5	1.232	2.369	58.664
11	Fatigue	75.0	1.219	2.345	61.009
12	Fever	81.5	1.161	2.233	63.242
13	Abdomen pain	75.5	1.105	2.125	65.366
14	Common cold	79.0	1.062	2.041	67.408
15	Helminthiasis	58.0	1.019	1.959	69.367

Extraction Method: Principal Component Analysis.

The female workers in the garment factory had to work by sitting for a long time that cause problem in their bones. There is no scope for the female workers to leave their desk for a few minutes to get relax and always work under close

supervision. This nature of job cause problem in bones as well as back pain to the female workers.

The most of the owners of the garment factory are reluctant to retain the female workers who have baby. For this reason, the female workers take birth control pill to avoid pregnancy and if unconsciously becomes pregnant she makes abortion to continue the work. This in turn causes health problems.

The female workers in the garment factory had to work in very unhygienic and closed environment. There is no ventilation system to pass the air to make working place free from suffocation. This unfavorable working conditions sometime cause dermatitis and pruritus to the female workers. Buildings of some garment factories are found to be very old and moisturized causing cold to the female workers.

The female workers can't afford to have balanced diet to keep them physically sound. In addition to this, sometime female workers had to starve due to less earning or can't take food timely due to work pressure causing gastric pain. It is very common that the female workers in the garment factory often take stale and rotten food as they could not afford fresh food which is responsible for abdomen pain. Similarly, fatigues are found among the female workers as the earning of the female workers is very limited and worried about the future.

Table 2: Coefficients

Sl no.	Factors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2.845	.098		29.148	.000
1	Problem in bones	.183	.098	.121	1.873	.063
2	Abortion due to retain job	.273	.098	.180	2.787	.006
3	Dermatitis	.349	.098	.230	3.564	.000
4	Back pain	.195	.098	.129	1.996	.047
5	Eye stain	.000	.098	.000	-.001	.999
6	Pruritus	.188	.098	.124	1.926	.056
7	Malnutrition	.255	.098	.168	2.604	.010
8	Respiratory problems	.062	.098	.041	.629	.530
9	Hepatitis (Jandice)	-.069	.098	-.046	-.709	.479
10	Gastric pain	.228	.098	.150	2.333	.021
11	Fatigue	.222	.098	.146	2.266	.025
12	Fever	-.021	.098	-.014	-.217	.828
13	Abdomen pain	.142	.098	.094	1.455	.147
14	Common cold	.193	.098	.127	1.968	.051
15	Helminthiasis	-.070	.098	-.046	-.720	.473

a Dependent Variable: Overall

Table 3 shows that the garment workers in Bangladesh are suffering from the problem in the bones. The female workers have to work for long time without moving anywhere else and for this reason they feel pain in their arms, legs, and muscle as well. In addition to this, during the work female workers feel tendon in different parts of the body and pain in the joint. Sometime it is also observed that when they hurried to do the work, they felt numbness and tingling in the finger and arms, and also felt problem in nerves system and ligament. Skeleton related health problem is formed by 8 different diseases that are related to the overall health condition of the female workers. All the variables have high factor loadings indicating that the variables have strong relationship with them.

Table 3: Health Problems Related with Skeleton and Muscle System

Sl. no	Variables	% of Health Problem	Factor Loading
1	Problems in bones	57.0	.696
2	Ligament	52.0	.684
3	Nerves	45.5	.623
4	Tendon observed in the different parts of body	54.0	.620
5	Pain in Joint	49.5	.507
6	Numbness and tingling of fingers and arms	55.0	.493
7	Trauma	52.0	.451
8	Body muscles	51.0	.429

Table 4 demonstrates an important disease which is the complexity due to abortion of the female workers. The majority of the workers are female in the garment industry. In most of the cases it is observed that the female workers had to loss their job if they become pregnant. In this case if any unexpected pregnancy occurred they go for abortion so that they can retain and continue their job. Sometimes, the female workers have to work over night in the factory premise and no separate spaces are available for them. As a result, in some cases, the female workers are compelled to make sexual contact with their coworkers and supervisors also and therefore, they suffer from sexual diseases.

Table 4: Health Problems Caused from Sexual Contact

Sl. no	Variables	% of Health Problem	Factor Loading
1	Abortion due to retain job	35.5	.839
2	Sexual diseases	43.5	.754

Table 5 reveals that the pruritus is one of the diseases the garment workers are suffering from in majority of the cases. The female workers had to work in a moist and closed environment that causes diseases like pruritus, skin allergies and these types of health hazard. Similarly the factory premises is also unhygienic and noisy and therefore, the majority of the workers suffer from a lot of diseases like

dermatitis, hearing problem, diarrhea disease, asthma, fungal infection, conjunctivitis and dysentery. This unhealthy environment is responsible for the following health problems which also have high factor loadings.

Table 5: Health Problems Caused from Unhealthy Environment

Sl. no	Variables	% of Health Problem	Factor Loading
1	Pruritus	59.0	.722
2	Dermatitis	57.0	.683
3	Hearing problem	53.5	.679
4	Fungal infection	49.0	.628
5	Skin allergies	55.0	.607
6	Diarrhea disease	66.5	.589
7	Asthma	50.5	.558
8	Cut injuries	54.5	.453
9	Conjunctivitis	52.5	.451
10	Dysentery	65.5	.390

Table 6 shows that the workers in the garment factory suffer from back pain as they are to work for long time without any interval. The nature of work of the garment workers are responsible for the below mentioned diseases of the garment workers in Bangladesh. Another important health problem the female workers face is stain on their eyes. As they are to work for long time and need a keen concentration to their work, an extra pressure is created on their eyes which also affect on the visual comfort. In addition to this, garment workers work in an uncomfortable environment that keeps their body sweating and results some other diseases like body ache, skin irritation and fainting in the work place. The fatigue is another important disease the garment workers are to suffer from. The garment workers are very anxious about their future. Therefore, high degree of fatigue, frustration and chest pain are seen among them. This factor has formed with the 15 health problems carrying high factor loadings that represent strong relationship with the problems. Mehta (2012) also showed that in the washing section, the workers are exposed to chemicals, particularly bleaches and detergents and are not aware of their health hazards leading to skin allergies.

Table 6: Health Problems Caused from Long Working Hours

Sl. no	Variables	% of Health Problem	Factor Loading
1	Back pain	68.5	.795
2	Fatigue	75.0	.788
3	Neck pain	65.5	.727
4	Eye strain	56.5	.678
5	Frequent body ache	54.5	.628
6	Hypertension due to heavy workload	41.5	.616
7	Skin irritation	54.0	.608
8	Pain in joint	74.0	.603
9	Frustration	76.0	.567
10	Stomach ache / Ulcers	55.0	.503
11	Fainting in the work place	52.5	.469
12	Body pain	69.5	.442
13	Eye problem / irritation	52.0	.386
14	Visual discomfort	58.0	.353
15	Chest pain	60.5	.346

The income of the garment worker is very low to fulfill their basic needs. Therefore, they can not buy the necessities and balanced foods to keep sound health. Sometime they had to starve and to take rotten foods that result in food poisoning, appetite problem, and other imbalances in their body. The female workers usually suffer from gastric pain. The workers generally can not take their meal on time due to the work load. Therefore, they are to suffer from the health problems mentioned in the table 7. These variables have high factor loadings that represent strong relationship with them.

Table 7: Health Problems Caused from Imbalanced Diet

Sl. no	Variables	% of Health Problem	Factor Loading
1	Malnutrition	65.5	.663
2	Food poisoning	69.0	.636
3	Less appetite	64.5	.547
4	Gastric pain	71.5	.605
5	Headache (frequent)	82.5	.583
6	Breathing problem	42.5	.467

Table 8 shows that the female workers also suffer from respiratory problem. Almost all the female workers engaged with the fabrics stitching in the factory and they continuously inhale the fabric dust causing respiratory health problem. In

addition to this lack of movement in the work leads to heart diseases. Therefore, these diseases are seen among the female workers in the garment industry of Bangladesh.

Table 8: Health Problems Related with Respiratory and Circulatory System

Sl. no	Variables	% of Health Problem	Factor Loading
1	Respiratory problem	46.0	.648
2	Heart disease	39.0	.502

Table 9 shows that another major health disease garment workers suffer from is hepatitis. In most of the cases garment workers are not provided pure drinking water in their factories. As a result they are affecting by the hepatitis B. The table also shows that the workers suffer from different types of diseases like fever, pain in abdomen, common cold and helminthiasis. These diseases are commonly observed among the garment workers in the garment industry of Bangladesh. These factors also have high factor loadings that represent strong relationship among the factors. The empirical evidence of Zohir & Majumder (1996) suggested that the workers in the Apparel units suffer from work related musculoskeletal disorders, particularly of neck, back and upper extremities are the most frequently reported work related health problems among garment workers. In another study conducted by Paul-Majumder (2003) study on the physical and mental health status of garment workers, particularly of female workers. It showed that various illnesses and diseases were widespread among the garment workers.

Table 9: Health Problems Related with Common Diseases

Sl. no	Variables	% of Health Problem	Factor Loading
1	Helminthiasis	58.0	.853
2	Pain in abdomen	75.5	.771
3	Common cold	79.0	.748
4	Hepatitis B (Jandice)	51.5	.704
5	Fever	81.5	.666
6	Neural problem	32.5	.633
7	Nausea and vomiting	51.0	.389
8	Musculoskeletal pain	52.0	.329
9	Anemia	57.0	.320

Analysis of variance shows that the diseases, identified through the factor analysis, are whole responsible for the overall health condition of the workers in this sector. The female workers in the garment sectors suffered from such diseases

which are very significant. The study shows that the identified diseases affect the performance of the female workers significantly in the garment sector of Bangladesh.

Table 10: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	107.617	15	7.174	3.765	.000
	Residual	350.578	184	1.905		
	Total	458.195	199			

a Predictors: (Constant), REGR factor score 15 for analysis 1 , REGR factor score 14 for analysis 1 , REGR factor score 13 for analysis 1 , REGR factor score 12 for analysis 1 , REGR factor score 11 for analysis 1 , REGR factor score 10 for analysis 1 , REGR factor score 9 for analysis 1 , REGR factor score 8 for analysis 1 , REGR factor score 7 for analysis 1 , REGR factor score 6 for analysis 1 , REGR factor score 5 for analysis 1 , REGR factor score 4 for analysis 1 , REGR factor score 3 for analysis 1 , REGR factor score 2 for analysis 1 , REGR factor score 1 for analysis 1

b Dependent Variable: Overall

4. Conclusions and Recommendations

In the readymade garment sector of Bangladesh a large number of female workers are found to continue their work even they suffer from various diseases and illness as they have no other alternative to survive in the society. The growth and development of the garment sector largely depends on the female worker because female workers are the main contributor to this sector. We should believe that ill workers can not give us healthy economy. The competitive strength of the garment sector in the world market is seriously affected by the health problems of the workers, since it decreases the productivity of the workers to a great extent.

Almost all the female workers in this sector suffer from various types of illness and diseases like the problems in their bones, complexity due to abortion, dermatitis, back pain, eye strain, pruritus, malnutrition, respiratory problems, hepatitis, gastric pain, fatigue, fever, abdomen pain, common cold, and helminthiasis. Though the garment workers were very young they suffered from anemia, female diseases, dysentery, etc. The female workers should be given some breaks to get relax during the work that will reduce their back pain, eye strain, and fatigue. The income level of the female workers is very low to survive. Therefore, they should be given such amount which will be enough to buy the necessities for their living. It will prevent them from malnutrition, gastric pain, abdomen pain and also fatigue. The presence of appropriate working condition, pure drinking water and separate rest room for the female workers should be ensured in the factory so that the propensity of some diseases like dermatitis, pruritus, respiratory problems, hepatitis, fever, abdomen pain, common cold, helminthiasis and diseases from sexual contact could be minimized.

Most of the health problems that the garment workers suffered arose from the occupational hazards including long working hours, absence of leave facilities, congested and over-crowded working conditions, absence of health facilities and safety measures, absence of staff amenities, lack of safe drinking water, lack of first aid box, safe working counseling or psychological counseling etc. Harrington & Gill (1989) reported that occupational health hazard is concerned with health hazard in relation to work environment. The science of occupational health hazards covers a wide field, like work physiology, occupational hygiene, occupational psychology, occupational toxicology etc. In addition to this, workplace hazards can be efficiently managed through the provision of protective equipment and/or the payment of a compensating differential for employment involving health risks.

Female workers should be equipped with preventive measures while working with chemical compound. In addition to this, factory should have safety policy to practice and female workers should be given safety training, precaution in handling load, advice workers from awkward postures, ensure first aid box and trained workers to utilize it, and psychological counseling is essential to minimize the health hazards.

Healthy people are productive people. There is no alternative but to keep the people sound physically and mentally to ensure efficient manpower for the country. The large number of population will be active, productive and will make contribution for the society as well as for the country if they can afford and/or will avail of the opportunity of healthcare to keep them free from illness and diseases. The policy makers, authority and concern bodies should take special care to ensure healthy and productive workforce in our country to fulfill the dream of our Bangladesh.

Appendices

Appendix 1: Communalities

SI no.	Factors	Initial	Extraction	SI no.	Factors	Initial	Extraction
1	Fever	1.000	.701	27	Neck pain	1.000	.785
2	Common cold	1.000	.656	28	Pain in joints	1.000	.724
3	Diarrhea disease	1.000	.706	29	Anemia	1.000	.581
4	Dysentery	1.000	.647	30	Musculoskeletal pain	1.000	.629
5	Headache (frequent)	1.000	.580	31	Respiratory problems	1.000	.509
6	Nausea and vomiting	1.000	.699	32	Asthma	1.000	.721
7	Skin irritation	1.000	.715	33	Dermatitis	1.000	.768
8	Frequent body ache	1.000	.598	34	Hearing problem	1.000	.740
9	Fainting	1.000	.579	35	Visual discomfort	1.000	.701
10	Malnutrition	1.000	.707	36	Fatigue	1.000	.746
11	Eye strain	1.000	.691	37	Frustration	1.000	.687
12	Less appetite	1.000	.688	38	Neural problems	1.000	.671
13	Food poisoning	1.000	.723	39	Gastric pain	1.000	.680
14	Chest pain	1.000	.648	40	Breathing problem	1.000	.715
15	Pain abdomen	1.000	.759	41	Heart disease	1.000	.679
16	Body pain	1.000	.585	42	Hypertension	1.000	.709
17	Hepatitis (jaundice)	1.000	.721	43	Trauma/injury	1.000	.711
18	Fungal infection	1.000	.691	44	Helminthiasis	1.000	.791
19	Numbness and tingling of fingers and arms	1.000	.735	45	Pain in body muscles	1.000	.738
20	Skin allergies	1.000	.680	46	Pain in joints	1.000	.608
21	Pruritus	1.000	.733	47	Tendons	1.000	.677
22	Cut injuries	1.000	.748	48	Ligaments problem	1.000	.725
23	Conjunctivitis	1.000	.709	49	Problem in bones	1.000	.751
24	Eye problems /irritation	1.000	.641	50	Complexity in nerves	1.000	.773
25	Stomach ache/Ulcers	1.000	.663	51	Sexual disease	1.000	.711
26	Back pain	1.000	.711	52	Abortion complexity	1.000	.795

Extraction Method: Principal Component Analysis.

Appendix 2: Number of Garment Factories and Participation of Workers by Year

Year	Number of Garment Factories	Employment (in Million Workers)
1996-1997	2503	1.300
1997-1998	2726	1.500
1998-1999	2963	1.500
1999-2000	3200	1.600
2000-2001	3480	1.800
2001-2002	3618	1.800
2002-2003	3760	2.000
2003-2004	3957	2.000
2004-2005	4107	2.000
2005-2006	4220	2.200
2006-2007	4490	2.400
2007-2008	4743	2.800
2008-2009	4925	3.500
2009-2010	5063	3.600
2010-2011	5150	3.600

Source: <http://www.bgmea.com.bd/home/pages/aboutus> (Accessed Date: December 1, 2012)

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