

Health Issues of Female Garment Workers: Evidence from Bangladesh

Md. Shohel Mahmud¹, Vinay Rajath D.¹, Rayhan Mahmud² and Mst. Nusrat Jahan³

Abstract

Readymade garment industry is the most crucial export earning industry in Bangladesh. Currently, around 4.5 million workers, of whom 80% are female, are working in the industry. Due to the poor working environment and arduous nature of the job, women workers in the industry are vulnerable to diverse physical and psychological health hazards. A cross-sectional descriptive study was carried out among 360 female workers of the garment industry in Dhaka to examine their health issues. The study found respectively 88%, 75% and 55% participants were suffering from headache, hand pain and respiratory complications due to the nature of their work, working posture and dust and chemicals, while 69% participants reported experiencing depression. The causes identified for physical health hazards were uncomfortable sitting positions (79%) and noise (75%), while fear of accidents (75%) was found to be the main reason for psychological troubles.

Keywords

Readymade garment industry; female workers; physical health; psychological health; causes; Bangladesh

Introduction

Over the last couple of decades, the readymade garment industry in Bangladesh has experienced exceptional growth and unlike many other industries in the country never witnessed any major setback. The industry that has been making crucial contributions to the country's economy after gaining its independence in 1971, is now the single biggest export earner of the country (Bangladesh Garment Manufacturers and Exporters Association [BGMEA], 2017; Curran & Nadvi, 2015; Wadud, Huda & Ahmed, 2014). The garment industry which was established in the 1980s soon outdistanced the only major export earner

¹ Department of Sociology, Mangalore University, Mangalagangotri-574199, Karnataka, India.
Email: Shohel.anthropology@gmail.com; <https://orcid.org/0000-0003-2172-3593>

² Department of Business Administration, Noakhali Science and Technology University, Noakhali-3814, Bangladesh.

³ Department of Food and Nutrition, National College of Home Economics (University of Dhaka), Dhaka-1207, Bangladesh.

of the country, "the golden jute". The garment industry now accounts for 81% of Bangladesh's total export earnings and rated second largest exporter of garments in the world (BGMEA, 2017; Mahmud & Rajath, 2017; Theuws et al., 2013; Transparency International Bangladesh [TIB], 2013).

However, the health of Bangladesh's 4.5 million workers, of whom 80% is female, working in approximately 4,500 factories is under scrutiny (Accord on Fire and Building Safety in Bangladesh [Accord], 2017; Alliance for Bangladesh Worker Safety [Alliance], 2014; BGMEA, 2017; Karim, 2014; Mahmud et al., 2017; Miah & Hossain, 2014; National Human Rights Commission Bangladesh [NHRCB], 2014; Bangladesh Occupational Safety, Health and Environment Foundation [OSHE], 2009; Rahman & Islam, 2013a; Solidarity Center, 2015b; Vixathep & Matsunaga, 2015). Rapid expansion of the garment industry has created massive employment opportunity particularly to the poor, less educated and rural women but which ignored workers' health and safety in the workplace. Garment workers in Bangladesh work around 9-12 hours a day, often 7 days a week, in confined and unhealthy environments without adequate rest and food (Farhana, Syduzzaman & Munir, 2015; Zohir & Paul-Majumder, 2007). They are also among the lowest paid in the world (Absar, 2001). Tremendous work pressure, in addition to poor working environment and facilities, make garment workers vulnerable to a number health issues, and when it comes to the female workers, the condition is much more austere.

In view of this, this paper explores the physical and psychological health perils of female workers in the garment industry in Bangladesh. The study identifies health issues affecting female garment workers as a result of the nature of their work, working posture, and dust and chemicals while psychological health issues were related to workplace hazards, namely occupational safety, lack of leisure time and ill-treatment among others.

Objectives

The specific objectives of the study, in the context of Bangladeshi female garment work, are to explore their (i) physical health issues (ii) psychological health issues and (iii) causes of health issues, physical and psychological.

Methods

Study settings

This study was conducted in three districts in Dhaka, namely Dhaka, Gazipur and Narayanganj. These three districts host respectively 1,961, 1,297 and 734 garment factories and together account for the largest garment factories in the country (Department of Inspection for Factories and Establishments 2015). For this study, a total of 36 garment factories were selected from all three districts, 12 from each district, without any prior knowledge about their

workplace condition and health status of the workers. The factories were chosen on the basis of their export orientation status, hence they have to comply with conditions imposed by the Bangladesh government and International Labour Organization. Data for this paper was collected during a span of 8 months, from September 2016-April 2017.

Study participants

Globally, the garment industry is female-dominated (Solidarity Center, 2015a; Stotz & Kane, 2015), which accounts for three-quarters of total employees in the industry (OSHE, 2009; Heath & Mobarak, 2015; NHRCB, 2014; Stotz & Kane, 2015; Wadud & Huda, 2017). Female workers in Bangladesh are predominantly employed in the low-skilled and labor-intensive sectors which make them vulnerable to health issues(TIB, 2013). On the other hand, male workers hold senior managerial and supervision positions (Paul-Majumder & Begum, 2000; Islam & Chowdhuri, 2014). Considering the state, data for this paper was collected from 360 female garment workers representing 36 garment factories (10 participants from each factory). In order to make sure each factory is represented by 10 participants, the first participant assisted in selecting workers from another factory who later helped to reach her co-workers of the same factory. This method was adopted as data was collected from the residential locations of the participants, where it was not feasible to identify workers of the same factory randomly. Moreover, to ensure data validity, participants were selected based on two factors - first, participants' tenure in the industry and second, their self-interest in participating in the study. Workers employed for less than six months were excluded from the study. This measure of excluding workers with less than 6 months of experience was taken considering the state that women workers had healthy life prior to entering the garment industry and gradually got affected by different health complexities due to continuous exposure to various hazards (Zohir & Paul-Majumder, 2007).

Data collection

A questionnaire was designed with the aim to ascertain the health status of Bangladesh's female garment workers. There were 14 questions, with multiple choice and open-ended options. The questionnaire was broadly divided into two sections: (1) female workers health status and issues and (2) causes of their health problems. The section on health issues was divided into two sub-sections: (1) physical health issues and (2) psychological health issues. Similarly, causes of the health issues were also divided into physical and psychological issues. Furthermore, observation method was used to gain a greater understanding about the issues of the investigation.

Procedure

Data were collected from the residential locations of the garment workers, considering the fact that they will not be able to respond without the presence of superior authority, and that could lead to biased and inaccurate information. Prior to data collection, the aim of the study was explained to each participant by the researchers and verbal consent was obtained from them. Participants who decided to quit at any stage of the data collection process were excluded

from the study. In addition, identity of the participants was not disclosed to anyone or any party.

Data analysis

After completing data collection from each participant, data were rechecked and confirmed. Furthermore, following the completion of data collection from 10 participants of one factory, data were recapitulated to them in order to check data consistency and accuracy. At the same time field notes were also checked line by line. Any inconsistency, whenever found, explanation was sought from the participants mostly on the spot or revisits were made on a subsequent day. Data in the paper then were presented in frequency in table and figures. Finally, health hazards of the female garment workers in Bangladesh were analyzed and discussed in the paper.

Results

Characteristics of the participants

Majority of the study sample was 30 years or younger, literate (89%) and had formal education whereby 59%, 25% and 5% participants had 5, 10 and 12 years of schooling respectively with only 11% having no formal education (see Table 1). A total of 82% of the participants were married, 16% unmarried and 2% were separated or widowed. Majority (97%) of the participants were rural migrants. Of the total participants, 210 were sewing operators, and 150 were sewing helpers. Majority of the participants (59%) have been working in the garment factories between 1 and 5 years 25% and 18% were working for 6 or more years and less than a year respectively.

Table 1: Characteristics of female garment workers

Characteristics	Categories	N (%)
Age, years	14-20	115 (32)
	21-25	123 (34)
	26-30	79 (22)
	31 or more	43 (12)
Education, level, year	Intermediate, 12	18 (5)
	High school, 10	90 (25)
	Primary school, 5	212 (59)
	Illiterate	40 (11)
Marital status	Married	295 (82)
	Unmarried	59 (16)
	Separated	3 (1)
	Widowed	3 (1)
Migration status	Yes	349 (97)
	No	11 (3)

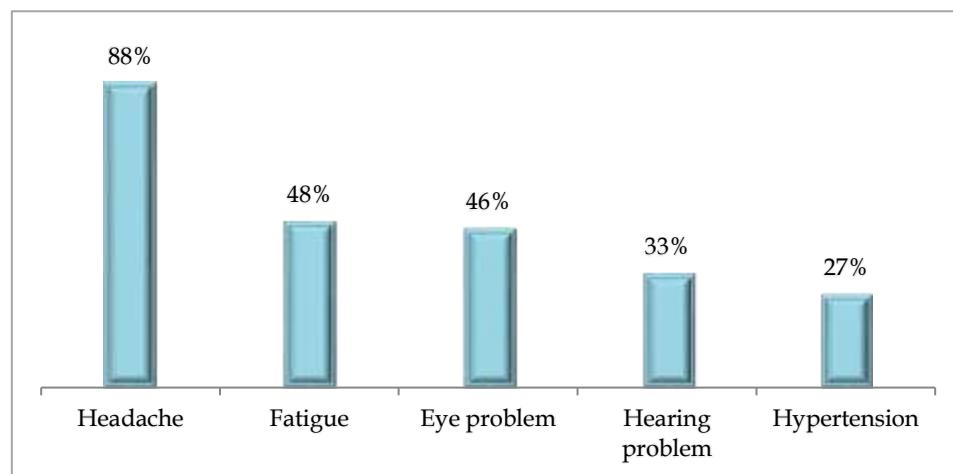
Table 1 Continued

Characteristics	Categories	N (%)
Occupational status	Sewing operator	210 (58)
	Sewing helper	150 (42)
Length of service in garment industry, years	0.5- less than 1	65 (18)
	1-5	205 (57)
	6 or more	90 (25)

Physical health issues

Physical health issues due to nature of job

Working in the garment industry is physically demanding with continuous exposure to loud noise, improper lighting and stress. In addition, the working environment in the factories is often considered unhygienic and not worker friendly, which has an adverse effect on the workers' health (Figure 1). Therefore, majority of the participants (88%) reported suffering from chronic headache. The severity of the problem ranges from mild to chronic headache. The participants also confirmed they suffer from headache daily.

**Figure 1:** Physical health issues due to nature of job

In addition to physical labor, women workers are compelled to work for long hours every day and frequently go without proper food, rest and recreation, leaving them often fatigued (48%). About 46% of the participants reported experiencing eye problem, including limited vision, conjunctivitis and irritation. Most women workers are employed in the sewing section which produces the greatest noise in a garment factory. As a result, one-third (33%) of participants singled out experiencing hearing problems, including chronic and acute hearing loss and tinnitus. Others concede noise problem is quite serious. Additionally, participants mentioned having to work under consistent pressure, follow tight schedule and compelled to achieve daily working target, and quite frequently work 7 days a week without proper rest or recreation and that too with minimal pay. This dire situation in addition to often personal issues make the workers vulnerable to a number of stresses ultimately resulting in many of them being diagnosed with hypertension (27%).

Health issues due to working posture

Employees follow a stringent routine and therefore, participants admit they hardly have any rest time during working hours. This rigid working schedule means they are forced to work in a particular posture for long periods which lead to a number of physical problems.

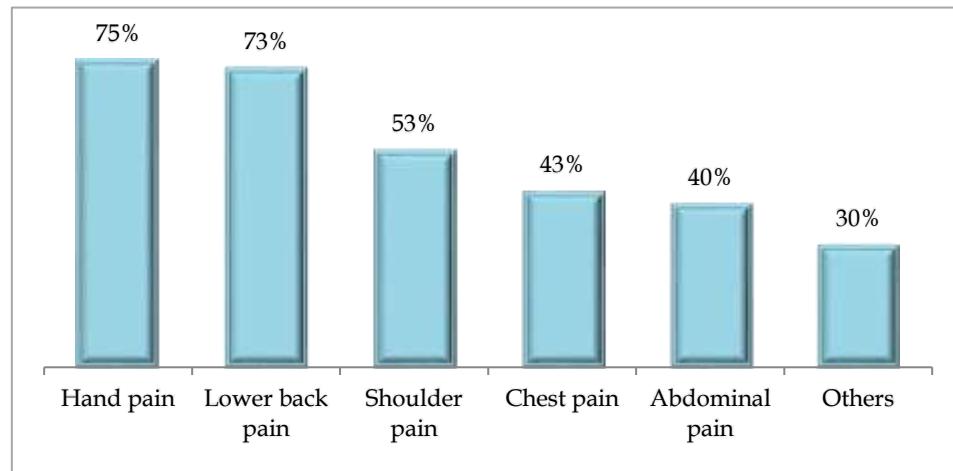


Figure 2: Health issues due to working posture

Three-quarters (75%) of the participants experienced joint pain, as they work continuously without any time off. It particularly affects their hand as they have to use their hands repeatedly and precisely all the time in a static, improper and awkward posture. About 73 percent of participants revealed suffering from lower back pain while approximately half (53%) cited shoulder pain. Chest and abdominal pain were also common among the workers, affecting 43% and 40% of the participants respectively. Finally, 30% of participants admitted to experiencing leg, hip and wrist pain. Both operators and helpers, report troubling lower back pain, chest pain, hip and abdominal pain, while there was a higher prevalence of hand and wrist pain among the operators, and leg and hip pain were found to be common complaint among the helpers.

Health issues due to dust and chemicals

Exposure to dust and chemicals is common for the female garment workers while sewing or doing other works in the factory. Therefore, they are victims of health hazards resulting from dust and chemicals, as this dust is inhalable and respirable. As a consequence of constant contact with dust and chemicals every day without proper protection, workers suffer from diverse health perils. In the current study, more than half of the participants (55%) reported experiencing respiratory problems. Three major respiratory difficulties were identified: first, inhalation problem, as the workers were consistently exposed to the cotton dust without proper protection. In some severe cases, workers were found suffering from shortness of breathing (second) and in fewer cases, asthma (third). In addition to the exposure to the dust, respiratory difficulties may result from participant's constant suffering from headache and fatigue (Figure 1).

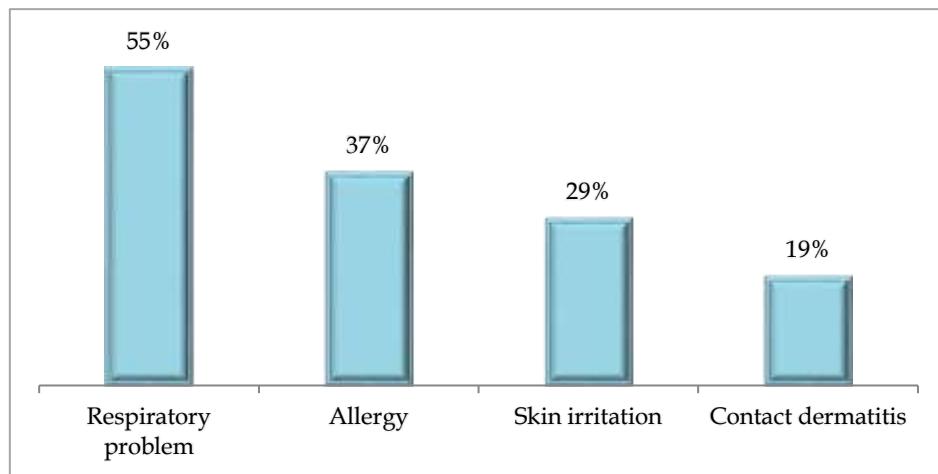


Figure 3: Health issues due to dust and chemicals

A total of 37% participant reported suffering from allergy due to continuous exposure to dust and chemicals in the factories, of whom 5 percent were found to have severe allergy. During data collection, some symptoms of allergy were noticed among the workers, such as sneezing, runny, stuffy and itchy nose, itchy and red eyes. The next problem due to dust and chemicals exposure was identified as skin irritation (29%). Workers with irritation issues reported feeling constantly itchy and uneasy on their body skin. In the end, a certain type of rash called contact dermatitis (19%) were identified among the workers that cause skin burning results from regular exposure to dust and chemical substances, capable of producing allergic reaction and skin irritation. Workers who were found to be suffering from contact dermatitis reported experiencing red, bumpy and sometimes severe itchy skin.

Psychological health issues

Good psychological health is important. The study found female garment workers were invariably vulnerable to a number of psychological troubles, often more than one at the same time. The four most common psychological complications that were identified were depression, mood disorder, phobia and anxiety (Figure 4).

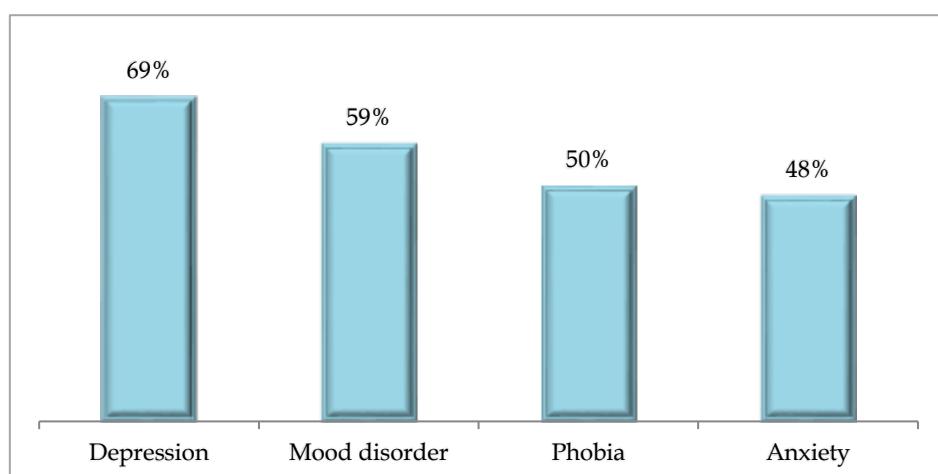


Figure 4: Psychological health issues

Depression was identified to be the most prevalent psychological issue among the participants, as 69% participants reported it in the first place. Several symptoms were noticeable among the workers during the data collection, for example, always or frequently feeling sad or having depressed mode, trouble in sleep, feeling worthless and fatigue. Subsequently, mood disorder (59%), serious and rapid change in mood, was identified which has both emotional and physical symptoms. Emotional symptoms include chronic sadness, feeling hopeless, and loss of interest in work, whilst physical symptoms include fatigue, headache, pain, and difficulties in remembering details. Subsequently, half of the participants said they were suffering from phobia. Although phobia has a number of symptoms, the study found workers regularly suffered from uncontrolled anxiety, headache and dry mouth. Anxiety (48%) was another big problem though (Figure 6). The workers reported feeling numbness, tingling, chest pain, headache, inability to rest and sleeping disorders.

Causes of health issues

Causes of physical health issues

Women workers in the garment industry in Bangladesh, work predominantly in the sewing section as operators and helpers. The operators are comparatively experienced and earn more than the helpers. The operators sew the garment while the helpers engage in small works such as cutting threads. Based on their nature of work, those who operate the sewing machine, for example, sit on the stool, while the helpers are entitled to no such arrangement and work in standing position during their entire time in the factory. As the workers need to work for long time every day with virtually no breaks or leisure time, poor and uncomfortable sitting arrangement (79%) causes several health difficulties, mostly pain (Figure 2).

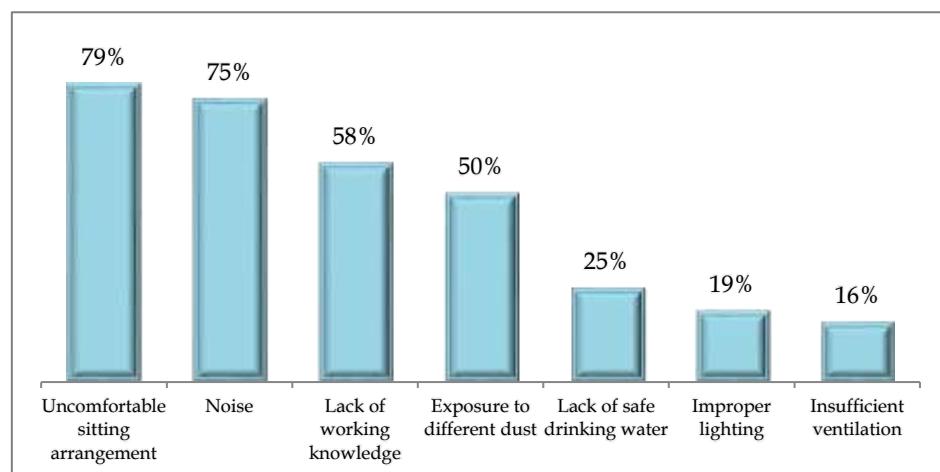


Figure 5: Causes of physical health issues

Health complications were mainly due exposure to loud noise (75%). In one floor, hundreds of workers operate the sewing machine causing a great deal of noise. Besides, as workers do not use ear protection devices while working, they are exposed to loud noise causing a number of health complexities, notably hearing difficulties. More than half of the participants (58%) belief lack of working knowledge was also responsible for their health perils followed

by exposure to dust (50%). Observation at the factories showed dust control management was not available. Some participants indicated though there are masks available, they are reluctant to use it as they feel uncomfortable and furthermore it is not mandatory to wear them. About 25% and 19% participants complained about lack of safe drinking water and improper lighting at the factory respectively. Water available in the factory according to the respondents, were not safe to drink and responsible for some of their health troubles, such as diarrhoea. Additionally, there is no proper lighting in the factory which has led to many complaining about eye problem whereby both over lighting and poor lighting were cited as a source. Finally, 16% of workers alleged insufficient ventilation at the factory for their health hazards. Poor and insufficient ventilation causes fatigue and affects workers health by disturbing their concentration at work. It also leads to poor air quality in the factory which contributes to headaches, allergies, dizziness, coughing and nausea and most notably, problems related to breathing.

Causes of psychological health issues

Majority of the participants (75%) cited accidents as the primary source of reason for their psychological distress. They marked regular fire in the factory as the most dangerous and frequent occurrence. Most common causes of fires were old electrical wiring and poor maintenance. The participants also pointed to the indifference of factory management to ensure safety at the workplace whereby fire management, in particular, was inadequate and posing threat to their lives. Furthermore, workers are often not provided with proper safety gears. Safety equipment is also lacking. All these have contributed to their psychological woes.

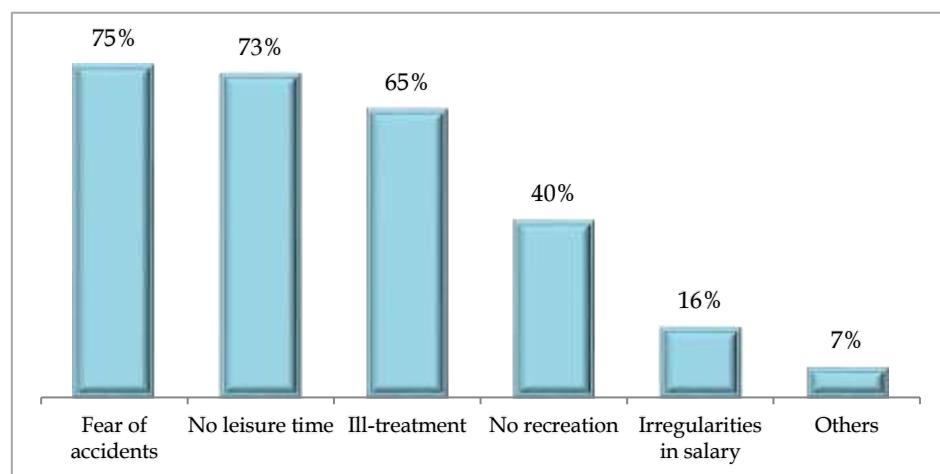


Figure 6: Causes of psychological health issues

It is a common fact that garment workers are compelled to work long hours, often until late night and forced to do overtime. In addition, they need to do household chores, including cooking and taking care of other family members, ultimately making their daily lives so busy they hardly enjoy any leisure (73%). This has contributed to psychological complications such as depression and anxiety. Ill-treatment at the workplace was described as another major source of psychological suffering where 65% of the participants admitted facing different types of ill-treatment. Derogatory comments (60%) were cited as the most common form of

verbal abuse that which affect their dignity and psychological state. Psychological abuse (44%) is related to high work pressure, poor, irregular and sometimes uncertain salary, insufficient family time and social exclusion and, unethical and unacceptable proposals including sexual from male coworkers or supervisors. About 22% and 10% of the respondents respectively reported facing physical and sexual abuse at their workplace. Physical abuse includes unwanted touching and pushing by male coworkers, while sexual abuse includes unwanted sexual proposals or advances. Lack of recreation was cited as the biggest contributor to their psychological issue (40%) Next, 16 percent of the respondents pointed to irregularities in salary payment as the reason for their psychological stress. Although majority of the participants received their salary on time, some reported to face difficulties in receiving payment on time. Some participants alleged that the factory forced them to sign a salary sheet indicating they have received their salary in full when in reality, they were not paid in full or not at all or were paid later. In addition, some participants said they were scammed by their superiors whereby they may have worked approximately 80 hours overtime in a month but only get paid equivalent to 60 hours. It is widely conceded that the garment workers in Bangladesh earn minimum salary which is hardly adequate to meet their basic needs. This causes them further distress. Finally, 7% workers pointed at some other issues such as uncertainty and scarcity of jobs, repetitive tasks, lack or no prospects of promotion, family and personal troubles, and chronic physical issues as sources of their psychological troubles.

Discussion

The present study had examined the predicament of female garment workers in the context of their health, both physical and psychological. The findings of the study are germane to other occupational health and safety researchers. Findings reveal that due to the nature of their job and lack of basic facilities in the factories, female workers are vulnerable to diverse health hazards. Researchers have also pointed to unhealthy and unhygienic working environment that contributes to the workers' health problems (Akhter & Shimul, 2012; Gupta et al., 2015; Nahar, Ali & Begum, 2010; Rahman & Islam, 2013b).

There upon, the question arises as to why women are joining the garment industry despite its inherent health hazards. Poor socio-economic condition, lack of income generating opportunities and ample work opportunities at the garment industry are the likely reasons. Rural women, in particular, have never had the opportunity to engage in the labor market until the setting up of the garment industry in Bangladesh (Bhuiyan, 2012; Heath & Mobarak, 2015). Prior to this, women were imperceptible in the public sphere due to the overwhelming influence of patriarchy and purdah (Mahmud, 1997). Furthermore, majority of the garment workers are rural migrants, lacked educational qualification and technical know-how (Rahman & Islam, 2013a). There were no opportunities for the rural women to earn and consequently, when the garment industry began offering jobs to these lowly skilled and inexperienced women, it received unprecedented response.

In addition, the rapid expansion of the industry also caused many buildings built for others purposes converted into garment factories without proper health and safety facilities (TIB, 2013). At the same time, when all other industries in Bangladesh were heavily regulated, garment industry was left out (Fukunishi & Yamagata, 2014). As a result, ensuring a safe workplace for its employees was always at the bottom of the garment industry's consideration. Moreover, the garment industry is a buyer-driven industry and international brands and retailers sourced countries that can offer products at cheap rates (Stotz & Kane, 2015). Stotz & Kane (2015) further looked at United Kingdom, Japan, Canada, Italy and France and found the garment production now has shifted mostly to China, Bangladesh, India, Pakistan and Cambodia. One of the main reasons for the transformation of garment production in the least developed and developing countries is the availability of cheap labor. In these countries, female workers comprise the majority of the total workforce in the garment industry who can be hired for very low wages. Moreover, in the least developed and developing countries, there are not many options for women to engage in income-generating activities due to lack of opportunities, qualifications and socioeconomic reasons. In addition, majority of the international buyers have their own rules about the workplace health and safety standards, and which are not strictly imposed; some brands are also reluctant to accept any responsibility if accidents take place (Theuws et al., 2013). After the deadly fire at Tazreen Fashions Limited in Bangladesh in 2012 which killed and injured more than 300 workers, international brands such as Walmart, Disney, Sears, Dickies, Piazza Italia, Hipercor (subsidiary of El Corte Ingles), Karl Rieker, Delta Apparel (parent company of Soffe) and Teddy Smith, denied or ignored their responsibilities, despite proofs they were sourcing their garment from this factory. (Theuws et al., 2013). This shows that although international brands and retailers have their specific set of rules regarding working standards for the countries and factories they source their garment from, they are neither strictly imposed nor followed. This study has also shown that due to high work volume, nature of work, poor working posture and continuous exposure to dust and chemicals have cause respiratory and skin-related ailments as well as body aches.

This study is important as it identified physical as well as psychological health issues of female garment workers in Bangladesh. This study also provided insights into health issues of the workers. It is evident from the study that stakeholders such as government, industry associations, employers and buyers were either ignorant or negligent about ensuring healthy workplaces for the workers. Because of that, despite being second largest garment producing country in the world and, highest export earnings and employment providing sector, workers are vulnerable to health hazards. Therefore, all associated stakeholder should work as a group, where owners of factories must be made legally responsible to ensure a healthy workplace for their employees. The government, industry association, employers and international buyers must also play crucial role through regular monitoring, audits and implementing necessary regulations to promote occupational safety and health of workers.

Limitations

Although this study is important as it explored the health issues of female garment workers in Bangladesh covering Dhaka, Gazipur and Narayanganj in Dhaka division, its results should be interpreted carefully. Studies conducted in other settings may show point to a different outcome. One limitation of this study is that it only focused on female workers of the garment industry, hence the present study's results cannot be generalized to all workers. Additionally, although women workers in the garment industry in Bangladesh predominantly work in the sewing section, few work in other sections as well, such as in the finishing section. This study focused only on female workers who were working in the sewing section of the industry. Furthermore, all the factories included in the study are export-oriented, hence the well-being, including health risks, of workers in domestic garment producing factories are unknown. This focus on only export-oriented garment factories could further limit the generalization of the present results.

Conclusion

This paper has studied the health issues, physical and psychological, of female garment workers in Bangladesh. The workers' socioeconomic status, their position in the factory, nature of their job, available facilities in the factory and repetitive work all contribute to their health issues. The study recommends that in order to protect the health of the workers, a flexible working environment is vital. Specifically, establishing a well-equipped medical center is also very important, where workers can receive fast and effective treatments. The management of the factory should act fast to solve any situation in the factory that may cause any harm to the worker's health. Finally, government, industry association such as BGMEA and buyers all should work together to improve the workplace health management of the garment industry in Bangladesh.

References

Absar, S. S. (2001). Problems surrounding wages: The ready made garment sector in Bangladesh. *Labour and Management in Development Journal*, 2(7), 2-17.

Accord on Fire and Building Safety in Bangladesh. (2017). *Working for a safe ready-made garment industry in Bangladesh: How the Accord on Fire and Building Safety works*. Dhaka.

Akhter, S. & Shimul, A. M. (2012). Working hazards as indicator of occupational stress of industrial workers of Bangladesh. *Asian Business Review*, 1(1), 140-144.

Alliance for Bangladesh Worker Safety. (2014). *Baseline worker survey report*. Dhaka.

Bangladesh Garment Manufacturers and Exporters Association. (2017). About garment industry of Bangladesh. Retrieved from <http://www.bgmea.com.bd/home/about/AboutGarmentsIndustry>

Bangladesh Occupational Safety, Health and Environment Foundation. (2009). *Working conditions and reproductive health status of female garments workers of Bangladesh (Study report)*. Dhaka.

Bhuiyan, M. Z. A. (2012). Present Status of Garment WORKERS in Bangladesh: An analysis. *International Organization of Scientific Research-Journal of Business and Management (IOSR-JBM)*, 3(5), 38-44.

Department of Inspection for Factories and Establishments (2015, May 15). *Number of RMG factories by district*. Retrieved from <http://database.dife.gov.bd/index.php/reports/number-of-rmg-factories-by-district>

Curran, L. & Nadvi, K. (2015). Shifting trade preferences and value chain impacts in the Bangladesh textiles and garment industry. *Cambridge Journal of Regions, Economy and Society*, 8, 459-474. doi: 10.1093/cjres/rsv019.

Farhana, K., Syduzzaman, M., & Munir, M. (2015). Present status of workers in readymade garments industries in Bangladesh. *European Scientific Journal*, 11(7), 564-574.

Fukunishi, T. & Yamagata, T. (Eds.). (2014). *The garment industry in low-income countries: An entry point of industrialization*. Hampshire: Palgrave Macmillan.

Gupta, R. D., Nag, S., Datta, D., Roy, S., Das, S. & Aziz, S. M. Y. (2015). Occupational health hazards among workers in garment factories in Bangladesh: A Cross sectional study. *Developing Country Studies*, 5(5), 90-98.

Heath, R. & Mobarak, A.M. (2015). Manufacturing growth and the lives of Bangladeshi women. *Journal of Development Economics*, 115, 1-15. doi: <http://dx.doi.org/10.1016/j.jdeveco.2015.01.006>.

Islam, N. & Chowdhuri, A. S. M. M. B. (2014). Socio-economic factors of readymade garments workers in Bangladesh. *D.U. Journal of Marketing*, 15, 305-325.

Karim, M. R. (2014). Effects of globalization on working women in the private sector of Bangladesh: A study of the garment industry. *Thai Journal of Public Administration*, 12(1), 67-96.

Mahmud, S. (1997). Women's work in urban Bangladesh: Is there an economic rationale? *Development and Change*, 28, 235-260.

Mahmud, M. S. & Rajath, V. D. (2017). Safety issues of female workers of garment industry in Gazipur District, Bangladesh. *Journal of Applied and Advanced Research*, 2(4), 265-269. doi: <http://dx.doi.org/10.21839/jaar.2017.v2i4.102>.

Mahmud, M. S., Rajath, V. D., Mahmud, R., Jahan, M. N., Hasan, M. R. & Rahman, K. M. A. (2017). Prevalence of health hazards: A study on the female workers of garment industry in Gazipur District, Bangladesh. *Journal of Applied and Advanced Research*, 2(3), 184-188. doi: <http://dx.doi.org/10.21839/jaar.2017.v2i3.91>.

Miah, M. K. & Hossain, M. S. (2014). A comparative study of HRM practices between foreign and local garment companies in Bangladesh. *South Asian Journal of Human Resources Management*, 1(1), 67-89. doi: 10.1177/2322093714526660.

Nahar, N., Ali, R. N. & Begum, F. (2010). Occupational health hazards in garment sector. *International Journal Biological Research*, 1(2), 01-06.

National Human Rights Commission Bangladesh. (2014). *Security and safety net of garments workers: Need for amendment of labour law*. Dhaka.

Paul-Majumder, P. & Begum, A. (2000). *The Gender Imbalances in the Export Oriented Garment industry in Bangladesh* (Working Paper Series No. 12). Washington, DC: The World Bank.

Rahman, R. I. & Islam, K. M. N. (2013a). *Employment poverty linkages: Bangladesh* (Discussion Paper 10). Geneva: International Labour Office.

Rahman, R. I. & Islam, R. (2013b). *Female labour force participation in Bangladesh: Trends, drivers and barriers* (ILO Asia-Pacific Working Paper Series). New Delhi: International Labour Organization.

Solidarity Center. (2015a). *Global garment and textile industries: Workers, rights, and working conditions*. Washington, DC.

Solidarity Center. (2015b). *Rana Plaza: Justice delayed: The second anniversary of the deadly factory collapse*. Washington, DC.

Stotz, L. & Kane, G. (2015). *Facts on global garment industry*. Amsterdam: Clean Clothes Campaign.

Theeuws, M., Huijstee, M. V., Overeem, P., Seters, J. S. & Pauli, T. (2013). *Fatal fashion: Analysis of recent factory fires in Pakistan and Bangladesh: A call to protect and respect garment workers' lives*. Netherlands: Stichting Onderzoek Multinationale Ondernemingen.

Transparency International Bangladesh. (2013). *Readymade garments sector: Problems of good governance and way forward*. Dhaka.

Vixathep, S. & Matsunaga, N. (2015). Does human and social capital enhance entrepreneurship? A case study of the garment industry in Bangladesh. *The International Journal of Economic Policy Studies*, 10(3), 29-50.

Wadud, Z., Huda, F. Y. & Ahmed, N. U. (2014). Assessment of fire risk in the readymade garment industry in Dhaka, Bangladesh. *Fire Technology*, 50, 1127-1145. doi: 10.1007/s10694-013-0349-2.

Wadud, Z. & Huda, F. Y. (2017). Fire safety in the readymade garment sector in Bangladesh: Structural inadequacy versus management deficiency. *Fire Technology*, 53, 793-814. doi:10.1007/s10694-016-0599-x.

Zohir, S. C. & Paul-Majumder, P. (2007). *Garment workers in Bangladesh: Economic, social and health condition* (Research Monograph 18). Dhaka: Bangladesh Institute of Development Studies.