Study of Occupational Health Hazards among some Women industrial Workers in the state of West Bengal : Issues and Consequences

Moumita Gupta

Abstract

Health is most valuable aspect for survival of human beings. Occupational safety deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards. The present study is based on the investigation at some industrial working places in Purba Medinipur, South 24-parganas and Howrah districts, in order to show the health hazards of working women at different occupational sites, as well as, its immediate cause and possible remedial measures. The study is based on primary data, collected from approximately 100 working women engaged in different occupations at selected factories. Methods applied are Individual and Group Interview, Case studies and Participant Observation method along with Purposive sampling. Selected women working in selected factories experienced occupational health hazards like skin problems, irritation in the eyes, headache, breathing problems like suffocation, as well as muscular and skeletal problems and Computer Vision Syndrome (CVS). Compared to male workers, it appears that female workers are more susceptible to occupational hazards in the present research. It is necessary to take proper care against health hazards at work places.

Key Words: *Health, Occupational Hazards, Working Women, Affected, Factory, Unskilled Workers*.

Introduction:

The concept of health and hygiene varies from society to society. In the preamble of the World Health Organization (WHO) constitution; "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being." In its 1948 constitution, (WHO) gave most popular definition of Health; "Health is a state of complete physical, social, and mental well-being and not merely the absence of disease or infirmity". Health is one of the major parameters of Women's development. Without proper health, women cannot be the preserver of the tradition and cultural heritage especially for the future generation. If anyone examines the proper occupational health problems among the women workers, they must study the types of women's work along with the hours of work, as well as, their remuneration details. It is a fact that now-a-days, all women are engaged in different types of work. But they mostly do not get any proper recognition as per their working hours

from the society. Their work is always underestimated and is not counted and their payments are very low or minimum and even are unpaid.

Since 1950, the International Labour Organization (ILO) and the World Health Organization (WHO) have shared a common definition of occupational health. It was adopted by the joint ILO/WHO Committee on Occupational Health at its first session in 1950 and revised at its twelfth session in 1995. Now-a-days, working women generally balance between family, works and working places simultaneously. They try to maintain rules, regulations, time schedule as well as different types of circumstances prevailing in all domains. All of these create stress among most of the working women. All women face a stress in their occupational area as well as with the male co-workers, employers etc. Moreover, most of the time, they are not satisfied with their jobs at par with their capabilities, needs as well as resources. Most of the working women are employed mostly in the agricultural sectors, cottage industries, food processing, domestic service, street vendors etc. (Kumar and Jadav, 2014).

According to Census of 2011, the work participation rate for women is 25.51 percent, lower than what was in 2001, which was 25.63 percent. The total number of female workers in India is 149.8 million. Among them, in rural and urban areas, the number of female workers is 120.8 million and 28 million respectively (Govt. of India, 2015).

A Brief Outline of the Background of the Present Study:

Basically hazards posed by physical, chemical and biological factors in work place are similar for both male and female workers but women on an average have a smaller stature, less physical strength and their vital capacity is 11% less than males. Their hemoglobin is approximately 20% less and they have larger body fat content. They have lower heat tolerance and greater cold tolerance (Stellman, 1994).

A number of factors can cause stress among working women. Besides these, sexual division of labour affects women's health in various ways. Following is a brief account of the types of possible hazard (Messing, 1997):

(i) Women basically play multiple roles in family, society as well as at working places. They usually maintain carry on with responsibilities in all these domains.

(ii) Shifting duties especially night shifts may cause several inconveniences in family responsibilities as a wife and as well as a mother.

(iii) Part-time or semi-permanent working women are deprived from many medical benefits such as Sick leave and Maternity leave compared to permanently appointed working women.

(iv) Many equipments in the factories are prepared for males, not for females.

(v) Most of the occupational sectors always discriminate between men and women, which may create mental stress among working women. They usually feel physically and mentally deprived compared to male workers.

(vi) As female workers are usually submissive and are not vocal and may compromise to accept lower wages than male. This may be the reason for employer's preference to appoint the more of females than males.

(vii) Moreover, most of the women face sexual harassment in almost all types of occupational sectors with some exception.

Various types of infectious diseases are contracted by some working women due to continuously washing plastic bags with some chemicals atsome plastic recycling industry; contamination and inhalation of harmful chemicals in laboratory, pharmacy etc. As a result, several cases of abortion, fetal death, miscarriage, birth to premature baby, mal-development, congenital defect etc. may take place among female workers (Herdman, 1985).

Musculoskeletal problems also affect some of the working women because they engaged in long time cleaning and dusting jobs, standing for long period in sales and marketing, in office, service center, shopping malls, factories, tailoring, beauticians, hairdressers etc. (Yasmin.et.al.2010).

Moreover, reproductive health problems of working women like menstruation problems, pregnancy related inconveniences may occur generally in case of some occupational areas due to stressful physical work (Drozdowsky et.al.1999).

At present, occupational health hazards have given rise to a new concept, namely, affluent health hazards. This is due to computer exposure, which leads to Computer Vision Syndrome (CVS). Several women now-a-days are working as receptionist, customer call attendees, even in clerical jobs. They are continuously sitting in front of computer and are victims of this hazard.

Literature Review:

Kumar and Jadav (2014) critically examined the occupational stress factors among 600 working women in the National Capital regions. According to them, inexperienced working women feel inconveniences more than those of the experienced women. They are usually deprived of proper training, adequate feedback and promotion facilities. According to them, work pressure should be reduced. Suitable environment along with minimum facilities, especially for women workers must be provided at the workplaces. Another significant paper shows the aspects of women's occupational health together with some critical reviews and also has discussed some current issues in this respect (Messing, 1997). One of the interesting papers shows the women workers as a special population (Stellman,1999). He has documented some

employment issues in United States with adequate data. He also covered the occupational health hazards and safety measures, which majority of working women faces all time in their working places. Another article by the same author (Stellman,1994) is related to occupational hazards of women workers. He discussed specially about causes of cancer due to occupation of working women. His paper covered women, work, and cancer. A significant and interesting paper by Rim (Rim, 2017) shows hazardous effects of occupation on the women workers, especially in case of reproductive issues. It points out the impact of different types of hazardous chemicals which dangerously affects the women workers when they are in pregnant, carrying 2-3 months. The paper based on occupational hazards among migrant women workers written by Moyce, (2018), shows how the migrant workers are affected in their workplaces compared to non-migrant workers. Most of them feel discomfort and are dissatisfied with the higher rate of adverse environmental and occupational exposures, language as well as cultural barriers, documentation status and political climate and also behaviours as well as attitudes of the country where they are compelled to stay especially for their job.

Area Selected for the Study:

Present research work is based on intensive investigations of some industries, both large and small-scale industries, in Purba Medinipur, South 24 pgs., and Howrah districts. Industrial area selected are located in the following regions:

1. The industrial belts at Haldia in Purba Medinipur are taken into consideration. The administrative locations of the industries are as follows:

   A. Mitsubishi Chemicals Private India Ltd., Bhunia Chak, Haldia

   B. Indian Oil Corporation, Vidhyasagar, Haldia

   C. Exide Private Ltd., Durgachak

   D. Sree Renuka Sugar Mill Ltd., City Centre, Debhog.

2. Industries at Falta industrial area, namely, Falta Special Economic Zone located 60 K.M. away from Calcutta in the district of South 24 pgs, on the banks of the river Hooghly.

4. The area located at 16/5, M.L.B. road, Bally in Howrah. It is a bindi manufacturing factory named as Suchita Arts.

The main criteria for selecting above industrial areas is that good numbers of women workers are engaged in different types of occupation in the factories and are facing various types of health hazards.

Objectives of the Study

The focal theme of this research paper is to analyze the health hazards of working women engaged in different occupations. The researcher points out the variable natures of occupational health hazards faced by women workers, engaged in both skilled and unskilled

Jobs at the specific selected factories. She endeavored to find out whether both skilled and unskilled workers suffered from occupational hazards or not. The research has studied the prevalence of the hazards and classified them. Moreover, objective of the paper is to create awareness of the hazards among people and help to decide before taking up an occupation.

Methodology of the Present Study:

The present researcher collected data approximately from 100 working women from each of the above-mentioned factories through individual and group Interview and participant observation and case study methods. Purposive sampling method was used in this study. Their perceptions are thoroughly studied through open ended and close ended questionnaires and schedules. Primary data was collected during the months of January to June in 2014.

Hazardous situations as found in the Study:

1. ***Industries in Haldia:***

In Haldia four factories namely, Mitsubishi, IOC, Exide, and Shree Renuka Sugar were selected for the study. The factories produce essentials for modern living, but have some specific health hazards that affect a lot of women workers regularly. Below are accounts of some of the hazards.

A. *Mitsubishi Chemical Private India Ltd:* Use of Acetic acid and Parazylene, give rise to serious skin problems and eye infections. About twelve women workers are employed in management section. Some of them suffer from Computer vision syndrome (CVS).

B. *Indian Oil Corporation (IOC):* mainly refines Crude Oil and produces several types of products such as, Petrol, Naphtha, ATF and Diesel. Diseases like Cancer, Back ache, muscular-skeletal problems and eye irritation occurred. Heart disease is also found. 70 women workers are appointed in this industry. Among them, 30 women are working in construction activities, 20 are in management section and rest are engaged in cleaning activities.

C. *Exide Industries Ltd*: prepares battery. Sulphuric Acid, distilled water and lead are used in production of battery.These cause serious breathing problems as well as burning sensation in the hands of the women workers. 30 women workers are involved in this industry. Several types of reproductive health hazards such as immune-suppression, hormonal disruption and even endometriosis are prevalent among them.

D. *Sree Renuka Sugar Pvt. Lt:* Prepares Sugar. Some chemicals are used, such as, phosphoric acid, Telophord 100, Nacl, Megnaphord-lt 7991, Ca $(OH)^2$, HCl, SMTF, Alkaline, formic acid, morphic bio acid, amailej. Soda-ash, caustic flake etc. Sulphuric acid causes eye irritation, respiratory problems with suffocation among the workers in this industry. Waste product is formed from the reaction of Sodium Chloride (Nacl) and Hydrocloric

Acid (Hcl) etc. This seriously affects the water of the surrounding areas. 8 -10 working women suffer in this factory. They are appointed as cleaners on purely contract basis.

2. ***Falta special Economic Zone (Plastocene Polymers factory):*** In Falta Special Economic Zone, there are 5 (five) sectors and the concentration of working women is mainly found in Sector I and II. They all work in the Plastocene Polymers factory in the Falta SEZ as unskilled labour. This factory imports plastic wastes from the U.S. or European countries. Wastes are brought in by ships. These are then washed, cleaned, dried, and sorted out. Thereafter, these are melted in machines to make plastic granules. Women mainly are appointed for this job. Generally, women always enter the vats and are engaged in cleaning and rubbing the plastics.

Most of the women workers came from Diamond Harbour, Dostipur, Digha, Sarisha etc. Normally, there are three daily 8 hourly shifts.The women are paid a daily wage of Rs.65. The labour contractor deducts Rs.5 as commission. Most of the women work in the morning and day shift (i.e. from 6a.m.to 2p.m.and 2p.m.to 10 p.m.). A few of them work in the night shift.There is a half hour Tiffin break. No place is set aside to take their lunch. They take food in the fetid atmosphere-sitting beside this pile of rubbish and waste. Although their toilets, no separate facilities exist for the women. There are not many holidays-the factory was closed for three days. In any case, no wages are paid during holidays. There is no bonus, no emergency medical arrangements even they experienced an accident. The workers here must make their own arrangements for their medical treatment. Company does not give any facilities to their workers.

Skin ailments are one of the most common diseases among these working women as because, they working continuously in water throughout all the working hours. As there are no such fresh water facilities, most of the time, women workers compelled to take their lunch along with their dirty hands. As a result, liver problem arises. Moreover, recurrently using chemicals along with their hands during working hours may increases the fatal risk to pregnant working women.

3. ***Suchita Arts***: The main function of the factory is decoration and ornamentation of the Bindi of various sizes and shapes. Twenty-five female workers are working here belong to age group of 18 to 35 yrs. The work starts at the factory at 9A.M. and closes at 6P.M. with half an hour recess at 1 P.M.

The workshop is functioning in a room having size of 20ft. and 10ft. Each worker sits on the cemented floor and provided with a small wooden tool in front for working.

The factory is not manufacturing any type of bindi. They purchase the already cut out shapes from market. These are arranged in decorative manner and arranged on laminated cardboard numbering 144 bindis on each piece. These bindis are made decorative and attractive by the female labourers in this factory, using various kinds of materials.The total

production of the factory varies from 2500-2600 gross (1 gross =12 dozens) per month. The output per worker per day is approximately 4 gross. The names of bindi that are decorated here are Shee, Sarmili, Bobby, Kohinur, Memshab and Joygobindra. The owner reported that a labour is paid Rs.20/ per day for decoration of four sheets of bindi. A sheet contain one gross of bindi. The labour cost comes to approximately Rs.5/ per sheet of Bindi. The sale price of 1 sheet of bindi is Rs.15/. Hence, the total sale per month comes to 38,000/-40,000/. The bindis are sold in the wholesale market through the agents.

Various types of raw materials are used for decoration of different types of Bindi. Gum made by Mafatlal Company is used here as adhesive material. Decorative materials, such as Velvet cloths, golden stick, metal balls of different sizes, ring, softone, kundan plastics, seasame seed and plastic beeds are used. These materials are purchased from Bagri market, Canning Street in Calcutta. Equipments, which is mainly required for this job are, a wooden tool of low height, a forceps, and a pointed needle with handle.

As a result of discussion with the owner of the factory, it was found that the factory was running with profit to the tune of 25% to 30% of the total sale per month. It can also be observed that women suffered from various occupational health hazards in this factory. They mainly suffered from headache, eye irritation, backache, Joint pain, suffocation, and other job-related health problems. As they spend a couple of hours sitting on the floor or small tools bent over their jobs, backache is the most common occupational health problem among them.

Table No.1: Participation of women in different jobs across the Industries

Name of the Industries	**Different types of job categories**									
	Construction Engineer		**Management Workers**		**Semi-Skilled Workers**		**Unskilled Workers**		**Total Workers**	
	Number	%	Number	%	Number	%	Number	%	Number	%
Mitsubishi	-	-	1	5	-		10	20	11	11
IOC	10	100	10	50	-		15	30	35	35
Exide	-	-	7	35	-		5	10	12	12
Renuka Sugar	-	-	2	10	-		5	10	07	7
Falta Plastic Recycling	-	-	-	-	5	25	10	20	15	15
Suchita Arts	-	-	-	-	15	75	5	10	20	20
Total	10	100	20	100	20	100	50	100	100	100

Following tables show the distribution of women workers in terms of job and the factories they are employed in and the kind of health hazards suffered by the women workers.

Table - I, shows that there are four different occupational types exist in the selected factories. These are construction engineer, management workers, semi-skilled and un-skilled workers. In the six factories 50 women workers are engaged in unskilled work. Jobs are given to the workers according to their age, educational qualifications, working skills as well as efficiency. Unskilled workers generally came from lower income group families. They were mostly illiterate. Some are also class V passed. Their economic condition is poor. They have taken up unskilled work in order to maintain their subsistence. Occupational hazards found among them are more compared to those engaged as construction engineer and those working in Management section and as Semi-skilled workers.

Table no.2 Health Hazards of women associated with different categories of job

Job Category	Different types of Health Hazards											
	Muscular-Skeletal disorder		Head ache		Eye irritation		Skin problem		Reproductive problem		CVS (Computer Vision Syndrome)	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
A	2	25	3	15	-	-	-	-	-	-	5	33.33
B	3	37.5	4	20	-	-	-	-	3	15.78	10	66.66
C	3	37.5	3	15	4	25	5	20	5	26.32	-	-
D	-	-	10	50	12	75	20	80	11	57.89	-	-
Total	8	100	20	100	16	100	25	100	19	99.99	15	99.99

A: Construction Engineer

B: Management Worker

C: Semi-skilled Workers

D: Unskilled Workers

Table-2 presents the levels of different health hazards among the selected job categories of all the female workers of the present study. Skin problems (n=25) and headache (n=20) are two major health problems among them. These are mostly with un-skilled jobs rather than other jobs. Unskilled jobs are with long-working hours and are painstaking. Women are continuously confined at one place. They are low paid. Reproductive problem (n=19) is marked

among them. It is also noted that muscular-skeletal disorder (n=8) higher both in Management and Semi-skilled Section. CVS (n=15) is highest (=10) in Management Section. This type of ailment is very common among other white-collar jobs compared to unskilled jobs. These are Computer based job which results in CVS.

Concluding Observations:

We have come to know from this study that working women from different social strata face various kinds of occupational health hazards. Therefore, they need to be protected. If the employers are made aware of the types of hazards at different occupational sectors, only then it can be minimized. The prevention of CVS can be done if the employers give respite from continuously working in front of the computer. Proper computer table, chair, proper colour monitor along with proper positioning of light are needed for solving these problems. Next generation will be endangered if women folk are not protected from health hazards. Moreover, the educated employers should take adequate measure and minimize health hazards of their women employees.The women workers should also be made conscious about occupational health hazards and subsequent preventive measures through mass media.

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Bio Profile of the Author:

Asst. Professor, Department of Anthropology,
Dr. A. P. J. Abdul Kalam Govt. College, Rajarhat, Newtown,
E mail: moumitaguptaap@gmail.com