International Journal of Humanities & Social Science Studies (IJHSSS)
A Peer-Reviewed Bi-monthly Bi-lingual Research Journal
ISSN: 2349-6959 (Online), ISSN: 2349-6711 (Print)
ISJN: A4372-3142 (Online) ISJN: A4372-3143 (Print)
Volume-VII, Issue-II, March 2021, Page No.98-107
Published by Scholar Publications, Karimganj, Assam, India, 788711
Website: http://www.ijhsss.com
DOI: 10.29032/ijhsss.v6.i4.2020.1-8

Occupational Health Hazard of Female Beedi Workers in Rural West Bengal: A Case Study

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Abstract:
The beedi manufacturing industry is one of the important home-based unorganized industries in India. Most of the beedi workers are poor and spend more hours for beedi rolling in unhygienic, dingy and overcrowded places. According to the estimates of Ministry of Labour and Employment (2015) there are 6.4 million beedi workers in India most of them are female. Constant inhalation of tobacco fumes leads to several diseases like cancer, T.B., eye problems etc. This study aims to explore the living conditions and occupational health problems experienced by the female beedi workers in the Murshidabad district of West Bengal. A total of 120 female respondents were surveyed for this study. The study found that 78.3 percent of female beedi workers suffered from headache, backache, neck pain, leg pain etc., 28.3 percent of the respondent suffered from asthma and 23.3 percent of the respondents suffered from respiratory disorder. This study proposes a framework to be implemented by the government organizations and NGO's for welfare of the beedi workers.

Keywords: Beedi rolling, employment, labour exploitation, occupational health hazard, social welfare scheme, wages etc.

Introduction: The beedi making industry is an important labour-intensive cottage industry, which provides ample employment opportunities to a large number of people of the rural villages of west Bengal. According to the estimates of Ministry of Labour and Employment (2015) there are 6.4 Million workers engaged in this particular cottage industry in India. Beedi manufacturing in India is largely undertaken in Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Karnataka, West Bengal, Bihar, Odissa and Uttar Pradesh (John, 2008). The estimated number of beedi workers in West Bengal is 19,74,239 (Singh and Singh, 2015). The industry in West Bengal is mainly concentrated in some of the districts viz. Murshidabad, Malda, Coochbihar, Uttar and Dakshin Dinajpur, while it is scattered in the rest of the districts.

The industry has the unique scope for providing employment opportunities not only at industrial premises but also at the residence of the worker. A special feature of the beedi

industry is that work is done through contractors and by distributing work in private dwelling houses where the workers take the raw material given by the contractor (the agent of the owner) and handover the finished product to him. It is a labour intensive task because each beedi is rolled individually. Women constitute a very high percentage of labour force in this industry. The reason for this is the work is done generally from home and women can do it while at the same time attending to their children and other household chores.

Most of the beedi workers are houseless or have houses which are very bad in condition. They spend more hours for blending or rolling tobacco in unhygienic, dingy and overcrowded places and constant inhalation of tobacco leads to disease like cancer, T.B., eye problems etc. Continuous inhalation of beedi fumes leads to health hazards and affects the birth of healthy child and even miscarriages. Due to the lack of awareness of their rights and proper education to the family members they are unable to avail the social welfare scheme at all.

The beedi workers start their work very early in the morning and work till the late evening. They have a very little bargaining capacity in respect of determining their wages. As a result, labour exploitation is common feature of this industry. They are paid less wages or sometimes no wages as the employer rejects beedis due to low quality. So, income of the worker is very low and cannot afford the basic needs for their family. Workers are also unable to bear education and medical expenses of the family and children. Due to the nature of the work the workers are subjected to various occupational and health hazards. Very few studies have been done related to occupational and health hazards of the unorganized informal worker. But they did not focus on occupational and health hazards of female beedi workers. Therefore, it is important to focus on the occupational health problems and examine the awareness among the female beedi rollers about the adverse impact of beedi rolling job on their health.

Objective of the Study:

The primary objectives of this study are-

1. To explore the living and working conditions of female beedi workers in the Murshidabad district of West Bengal
2. To study the common occupational health problems among female beedi workers in the study area
3. To identify various diseases faced by female beedi workers in the study area

The Study Region: Murshidabad is a district of the Indian state of West Bengal covering an area of 5,341 km^2 having a population of 71, 03,807 (Census, 2011). The district formed the eastern international boundary of state bordering Bangladesh from 1947 when India becomes independent. Padma River flows through the entire eastern boundary, separating the district from the district of Malda and Rajshahi (Bangladesh). Burdwan and Nadia are in the southern side and Birbhum and Pakur (Jharkand) are on the western side of the district. The density of population of the district is 1,334/km^2 which makes rank 4^{th} among the

districts in West Bengal and decadal growth rate is 21.1 percent which is much higher than the state average of 13.8 percent. The literacy rate is 66.6 percent (71.0 percent for male and 63.1 percent for female). 80.3 percent of the total population still lives in rural areas. Out of the total worker, 18 percent are engaged in household industry. The ratio of household industry worker to total worker is the highest among all the districts in the state. Cultivators and agricultural labourers are 14.7 percent and 32.5 percent of the total workers respectively.

Agriculture, horticulture, sericulture, small scale and cottage industry are the main occupations of the district. Rice, Jute, Oilseeds, Mango, Litchi and Silk are the most notable products of the district. The district is famous for its silk industry since the Middle Age. There are three distinct categories of silk industry, namely (i) Mulberry cultivation and silk worm rearing (ii) Peeling of raw silk (iii) weaving of silk fabric. Ivory curving is another important cottage industry from the era of Nawabs. The main area where the industry is flourished are Khagra and Jiaganj. 99 percent of Ivory craft productions are exported. Beedi rolling is also an important cottage industry flourished at the Jangipur sub-division.
The administrative headquarter of Murshidabad is Berhampore. The district has 5 sub-division viz. Berhampore Sadar, Jangipur, Lalbag, Kandi and Domkol. There are 26 CD Block, 7 Municipalities and 72 urban units in the district. Lalgola block is situated in the Labagh sub-division and located in the eastern part of district near the international boundary of Bangladesh. As per Census 2011, Lalgola has a total population of 3, 35,831 and 84 inhabited villages all of which are rural. The literacy rate of Lalgola is 64.3 percent and that of male and female are 65.8 percent and 62.8 percent respectively.

Sources of Data and Methodology: The present study is based on both primary data as well as the secondary data sources published in different books, journals and govt. agencies. Taking the objectives in mind a well-structured questionnaire has been used to collect primary data in the study region. For conducting field survey 3 villages (Panisala, Ramchandrapur and Sahabazpur) have been selected from Lalgola Block of Murshidabad district. From each village 40 respondents each and a total of 120 respondents have been selected based on purposive random sampling techniques. The sampled villages have been selected on the basis of certain criteria as given below:

a) all villages having the household industry worker higher than the district average,
b) out of the household industry worker more than 90 percent of them are female,
c) one village (Sahabazpur) having much higher literacy rate compared to the district average,
d) one village (Panisala) having much lower literacy rate compared to the district average and
e) all villages having well connectivity to road and Lalgola Block Primary Health Centre within 5 km.

The Secondary sources of data have been collected from District Statistical Handbook (2015), Ministry of Labor and Employment, Government of West Bengal, Census (2011) published by Govt. of India, Various Govt. Reports, Journal Articles, Research Papers, etc.

After obtaining the data, simple percentage method has been used to show the different aspects of living and working conditions as well as occupational health problems faced by the female beedi workers in the study region.

Result and Discussion:

Table 1: **Age distribution of the of survey population**

Age Group	No. of respondents	Percentage
Below 20 years	22	18.3
20-30 years	27	22.5
30-40 years	39	32.5
40-50 years	19	15.8
50 years and above	13	10.8
Total	120	100.0

Source: primary data

The above Table-1 shows the age group of total respondents among the female beedi workers in the study area. Almost 70.8 percent female beedi workers are of the mature age group. 18.3 percent of them are below 22 years and 10.8 percent are above 50 years. They are the most vulnerable section and badly exposed to serious health hazards.

Table 2: **Educational level of the survey population**

Educational Level	No. of respondents	Percentage
Illiterate	53	44.2
Primary	38	31.7
Secondary	23	19.2
Higher secondary and above	6	5.0
Total	120	100.0

Source: primary data

The above Table-2 shows that a major portion i.e., 44.2 percent are illiterate and 31.7 percent only are primary educated. Therefore, it can be said that almost 75 percent of the workers are not having access of modern ideas of the surrounding world. As most of respondents have poor level of education, they do not have access to a hygienic living condition due to ignorance. If a large section of workforce remains illiterate, they cannot be aware of their rights. Unawarded workforce are always the soft target of business owner.

Table 3: **Type of Housing Facilities**

Type of House	No. of respondents	Percentage
Kuchcha House (Mud, Grass, Thatch, Bamboo, Plastic,Uunburnt Brick etc.)	43	35.8
Semi-Pucca House	52	43.3

Pucca House	25	20.8
Total	120	100.0

Source: primary data

The above Table-3 shows the type of housing facilities among the sample workers in the study area. Majority of the houses (79.2 percent) are made of Mud, Grass, Thatch, Bamboo, Plastic, Unburnt Brick etc. (Kuchcha House) or Semi-Pucca Houses. only 20.8 percent of the households reside at Pucca Houses. So, housing facilities are not enough to sound living condition. They are compelled to live in a wretched condition due to poverty. Survey reveals that most of the respondents are deprived of centrally sponsored housing scheme of Pradhan Mantri Awas Yojona.

Table 4: **Sources of Drinking Water**

Drinking Water Sources	No. of respondents	Percentage
Private hand pump	62	51.7
Public hand pump	47	39.2
Private taps	5	4.2
Public taps	-	-
Well	6	5.0
Total	120	100.0

Source: primary data

The above Table-4 shows the sources of drinking water of the respondents. The underground water in the District is known for terrible Arsenic contamination. Especially the underground water of Eastern Part of the Ganges river. The surveyed area does not have any facilities of supply of drinking water. Almost 95 percent of the workers drink underground water from tube well. 5 percent of them use water of open well. They are badly exposed to water born diseases including disease of Arsenic effect.

Table 5: **Availability of Latrine Facilities**

Toilet Facilities	No. of respondents	Percentage
Within the premises	32	26.7
Outside the premises	88	73.3
Total	120	100.0

Source: primary data

The above Table-5 shows the availability of latrine facilities of the surveyed population. Only 26.7 percent of household have their latrine facilities within the premises and a large portion of the household 73.3 percent having their latrine facilities outside the premises. Therefore, the female workers depending on toilet facilities outside premises are more exposed and vulnerable in terms of being affected by infectious diseases. It also reveals that

most of the respondent fails to avail the govt. sponsored sanitation facilities. It brings to the light the failure on the part of the Panchyats for not catering the needs of the people and achieving the goal of the pollution free society.

Table 6: **Main Sources of Fuel for Cooking**

Fuel Used for Cooking	No. of respondents	Percentage
Firewood	10	8.3
Crop residuals	56	46.7
LPG	45	37.5
Others (Kerosene, Coal, Bio-gas, Cow dung cake, etc.)	9	7.50
Total	120	100.0

Source: primary data

The above Table-6 shows the source of fuel for cooking among the survey population of the study region. The majority of the households (46.67 percent) used crop residuals as a source of fuel for cooking. Thought major amount of household availed the ***Pradhan Mantri Ujjwala Yojana*** (launched in 1st May, 2016 to distribute 50 Million connections to women of bellow poverty line families) and having their LPG facilities at home, only 37.50 percent are used LPG for cooking. Therefore, 62.5 percent of the total household used fuel for cooking and domestic purpose other than LPG.

Table 7: **Job card or any other govt. facilities enjoyed**

Beedi Rollers / Spouse have Job Card	No. of respondents	Percentage
Yes	46	38.3
No	74	61.7
Total	120	100.0

Source: primary data

The above Table-7 shows the job card facilities enjoyed by the beedi workers in the study area. Only 38.3 percent beedi workers have their job card facilities while majority of them (61.7 percent) have not enjoyed any kind of job card facilities.

Table 8: **Reasons for not satisfied with the wages (Multiple answers)**

Reasons	No. of respondents	Percentage
Unable to meet household expenses	82	68.3
Unable to carry children's education	27	22.5
Hardly carry health expense	45	37.5

All the above	38	57.5
Total	120	-

Source: primary data

The above Table-8 shows the multiple answers of dissatisfaction of the beedi workers about their wages among the surveyed household. The income of the households are so low that 57.5 percent of them are unable to meet their day-to-day expenses, children's education and also unable to carry health expenses.

Table 9: **Various Health Problems faced by female Beedi Workers (Multiple answers)**

Health Problems	No. of respondents	Percentage
Headache, backache, neck pain, leg pain etc.	94	78.3
Spondylitis	21	17.5
Respiratory disorder	28	23.3
Gastrointestinal illness	6	5.0
Asthma	34	28.3
Tuberculosis	9	7.5
Blurred vision	3	2.5
Total	120	-

Source: primary data

The above Table-9 shows the various health problems faced by female Beedi Workers and the respondents gave multiple answers. Major predictable disease among the female beedi workers are Asthma, Head and Neck Pain. In the sample 78.3 percent reported Headache, Backache, Neck pain, Leg Pain and 28.3 percent reported Asthma. Public health facilities really poor in this locality. Moreover, 17.5 percent and 7.5 percent respectively of the surveyed population have already reported Spondylitis and Tuberculosis.

Major findings and Policy Implications: The govt. approved rate for beedi rolling is a minimum of 169 rupees for 1000 beedi rolling (Ministry of Labour, Govt. of West Bengal). But the average wages paid by the employer for beedi rolling is much lower than the govt. approved rate which is approximately 140 rupees. Beedi workers generally roll an average of 700-800 beedis during 8 hours working per day and earns approximately 110 rupees. Further, larger amount of beedi rejection on grounds of poor quality is very common exploitative practice in the industry. No wage is paid for the rejected beedis. The rejected beedis are either taken by middlemen or sold in the market at a lower rate.

Job card facilities of the beedi worker either 'her' or 'head of the family' enables the household to access the benefits under the Beedi Workers Welfare Fund Act, 1976. The benefits include welfare schemes for health, education, maternity benefits, group insurance,

recreation, housing assistance and so on. There are also special schemes to encourage education for children of beedi workers, especially for girl children. As majority of the household in the study region have lack of job card facilities, they are unable to get the benefits of these schemes.

The study reveals that female beedi workers have several health problems due to direct inhalation of tobacco flakes and dust. Headache, backache, neck pain, leg pain etc. are common health problems faced by large number of female beedi workers. Sitting for a long hour causes back and neck aches, joint pain, as well as arthritis and gynecological problems. Many reported asthma, respiratory disorder and spondylitis from long hours of work and exposure to tobacco.

Awareness of the female beedi workers regarding the adverse effects of their occupation and safety measure that has to be taken is very poor. The major diseases of the beedi rollers are respiratory disorders and asthma. The working condition of most of the beedi rollers in the rural areas is not favourable.

Due to the lower income of the family, children are also forced to work at an early age with their parents. As a result, dropout rate is high among the children of the beedi worker.
The contract system in beedi manufacturing should be abolished and initiatives should be taken to organize the Beedi workers to form their own co-operatives. All Beedi workers should be covered under social security scheme recommended by the commission. It is recommended that various laws relating to the Beedi industry should be brought under the ninth schedule of the constitution of India on the pattern of land reform laws.
To regulate the beedi industry, and to enable beedi workers to demand their legitimate rights, there should be a fool-proof registration system and ID cards provided to all workers and contractors so that the benefits can reach them.
Further, govt. will implement minimum wage law strictly. Implementation of poverty eradication programmes like the National Rural Employment Guarantee Act (NREGA) of Government of India can be an immediate alternative solution for Beedi workers.

Recommendations:

Following measures are suggested for solution of the problem of beedi workers. The measures should be adhered to by the appropriate authority.

i). Middleman and contractor system should be abolished. The negotiation should be direct between beedi workers and owner of the industry.
ii). Minimum wages at the rate of NREGA should be assured to each beedi workers.
iii). Arrangements should be made to have job card facility for each beedi worker.
iv). Free medical checkup programme should be undertaken by the owner of the industry every month.
v). In case of critical ailments either free medical treatment should be arranged or facility of health insurance should be given to the worker.
vi). Arrangements should be made so that each worker is able to avail of the various welfare schemes of the governments.

vii). Alternative way of employment should be provided after giving proper vocational training.

No problem can be solved in this world without honest attempt and zeal. So concerned authority should deal with the problem with proper care.

Conclusions: The study revealed that female beedi workers face numerous health problems possibly due to direct inhalation of tobacco flakes and dust. There is a need to aware the female beedi workers regarding their health hazards caused by tobacco and the need of protective measures at the time of beedi rolling. Also, there is a need to provide alternative livelihood options from the point of view of economic viability and skills of women. The study recommended that, the government should try to arrange the alternatives employment in that sense they can completely get out from this worse hazardous work.

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