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RESEARCH ARTICLE

A STUDY ON OCCUPATIONAL HEALTH HAZARDS AMONG WOMEN BEEDI ROLLERS IN TAMILNADU, INDIA

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ABSTRACT

The beedi industry occupies a prominent place in rural development in terms of its capacity to offer potential employment opportunities to a large number of people. For the beedi industry Tamilnadu is one of the major hub in India. It is estimated that around one million workers mostly woman and children are employed in Beedi making. It is an arduous, labour intensive task because each beedi is rolled individually. Beedi industry is almost an unorganized sector hence even the government officials finding it difficult to enforce the various legal requirements. Apart from the other legal implications the health hazards which the women employees who are rolling the beedis are enormous. This study aims to explore the level of health hazards experienced by the woman beedi rollers in Tamilnadu. A total of 388 usable responses obtained from women beedi rollers comprising from the beedi rollers concentrated districts i.e., Tirunelveli, Tuticorin, Tiruchirappalli & Vellore are used for this study. The study found that more than 70% of the beedi rollers suffered from eye, gastrointestinal and nervous problems while more than 50% of the respondents suffered from respiratory problems, mostly throat burning and cough. More than 75% of the respondents faced osteological problems. From the study is it understood that the health hazards level is very high. This study proposes a framework to be implemented with the Government agencies, NGOs and Welfare organizations for the welfare of the beedi rollers.

INTRODUCTION

A beedi is a thin South Asian cigarette made of 0.2-0.3 g of tobacco flake wrapped in a tendu *(Diospyrox melanoxylon)* leaf and secured with colored thread at both ends. As it is a cheap form of tobacco consumption, it is extremely popular among the non-affluent but it carries greater health risks as it delivers more nicotine, carbon monoxide and tar than conventional cigarettes. Beedi rolling is a popular small-scale industry in Tamilnadu, India. A special feature of the beedi industry is that

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work is done through contractors and by distributing work in private dwelling houses where the workers take the raw material given by the contractor and handover the finished product to him. It is an arduous, labour intensive task because each beedi is rolled individually. Women constitute a very high percentage of labour force in the industry. The reason for this is, firstly, 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; secondly, their deft fingers are more suited to the work of beedi rolling, besides, women are considered to be more sincere and hardworking. Srinivasulu (1997) reported that 90% of beedi workers are women. When beedis are stored in the house, food spoils quicker and family members experience nausea and headaches (Panchamukhi PR 2000).

Occupational health hazards of Beedi rollers

For women and children engaged in rolling beedis myriad of occupational hazards exist:

- The process releases large amounts of coarse particles and dust into the work environment (typically the home).
- Rollers do no wear protective clothing, gloves or masks, and are exposed to tobacco dust through their skin and by inhaling the harmful particles.
- The Factory Advisory Services and Labor Institute in Bombay, a unit of the Labor Ministry of India, found the incidence of bronchial asthma and tuberculosis to higher among beedi workers than any other group in the general population.
- Further health effects include pain and cramping in the shoulders, neck, back, lower abdomen, anemia and eye problems.

According to Bagwe and Bhisey (1991) and Swami *et al.* (1995) beedi rollers are exposed to unburnt tobacco, mainly through the cutaneous and naso-pharyngeal routes. Ranjitsingh and Padmalatha (1995) reviewed that beedi rollers were affected by respiratory disorders, skin diseases, gastrointestinal illness, gynecological problems, lumbosacral pain and are susceptible to fungal diseases, peptic ulcer, hemorrhoids and diarrhea. Numbness of the fingers, breathlessness and stomach pains including cramps and gas, have also been reported in beedi rollers (Dikshit and Kanhere 2000; Mittal et al. 2008), found that postural pains, eye problems and burning sensation in the throat are common ailments in women beedi rollers. Bhisey et al. (2006) recorded that inspirable dust of tobacco in the tobacco factory was associated with chronic bronchitis in workers. Kaur S, Ratna R (1999); Aghi and Gopal (2001) reported indurations of the hands and complications of pregnancy in women beedi rollers. Bagwe et al. (1992); Bhisey and Bagwe (1995); Mahimkar and Bhisey (1995) and Umadevi et al. (2003) researched on the cytogenetic toxicity caused by occupational exposure to tobacco. Although a number of occupational health problems have been reported for the women beedi rollers, information on the effects of tobacco dust various blood parameters of beedi rollers is lacking. Women beedi rollers who start their profession at a very early stage of life are exposed to tobacco dust for approximately 4 to 10 hours each day. We conducted this study with the purpose of collecting information on the health problems faced by the women beedi rollers and to throw some light on the sources of diseases that may result due to exposure to tobacco dust.

METHODOLOGY

The research design adopted for this study is descriptive cum exploratory type. The population for the study is nearly one million out of which four strata are chosen for the study. The study was conducted in the districts of Tirunelveli, Tuticorin, Tiruchirappalli and Vellore, India. 400 female beedi rollers, without tobacco smoking/chewing habits were contacted for occupation related exposure to tobacco flakes and dust. Relevant information was collected by visiting the house of each beedi roller. The study subjects were interviewed and a questionnaire was filled for each subject, which included details about their age, educational qualification, monthly income and health problems faced by them. Out of 400 responses 388 are found to be usable and hence the sample size for this study is 388. For this research disproportionate random sampling and justified

sampling methods are adopted. Strata are identified as the four districts namely Tirunelveli, Tuticorin, Tiruchirappalli & Vellore and in each district 100 samples are chosen based on the judgment of the researcher. The questions are prepared with the aid of literature and consultation with safety experts and doctors. Totally 50 questions were gathered in the first step. Those 50 questions were sent to the safety experts and doctors to get their valuable opinions and suggestions. The safety experts and doctors opinions were taken in to account on the basis of their remarks. Some questions were reworded, modified and eliminated. Finally 20 questions are formed under four dimensions:

- Physical Health
- Emotional Fittings.
- Safety
- General awareness

Scoring Procedure: Dichotomous scaling technique has been incorporated for this study.

Analysis of data

For this research distribution analysis is applied to analyze the data. According to the dimension of Physical Health 28% of the women workers are having skin diseases, 32% of the women workers having anemic problem and 77% of the women workers having eye disorders and knee troubles.
The dimension of emotional fittings reveals that 83% of the women workers are attending job when they are not physically fit. 71% of them affected by sedentary occupation which bothers mettle, 65% of the women workers don't have relish of food stuff when they consume it. 93% of the women workers are forced towards this work because of poverty. 97% of the women workers are not consulting doctors when they are not physically fit. Safety of the women workers reveals that 41% of them don't have proper day-light facility at work place and 44% of them don't have a proper ventilation facility at their work place. Almost 50% of them are affected by natural forces like, thunder, lightning, heat and rain at their work place.

According to general awareness 92% of the women workers are not aware of nicotine, 96% of them are aware that this occupation will cause cancer and Tuberculosis, 49% of them are affected by sexual Urge and 93% of them are aware that occupying children in this job might cause their education, physical health and general welfare. Thus all the dimensions of the study variables reveals that the health hazards existing in the beedi rolling environment experienced by the women beedi rollers is at an alarming rate. The next section dealt with the acts and statues applicable to the women beedi rollers.

Acts applicable to beedi Rollers

Apart from the various acts governing the industrial environment specific acts have been enacted by the government of India to safeguard the welfare of the beedi rollers. The various acts are as follows:

- Payment of Wages Act, 1936[vide Sec.28 of the B&CW (COE) Act, 66];
- Industrial Employment (Standing Orders) Act, 1946 [vide Sec.37 of the B&CW (CoE) Act, 66];
- Maternity Benefit Act, 1961 [vide Sec.37 of the B&CW (COE) Act, 66];
- Chapter IV and Section 85 of the Factories Act, 1948 [vide Sec.38 of the B&CW (COE) Act, 66];
- Industrial Disputes Act, 1947 [vide Sec.39 of the B&CW (COE) Act, 66];
- Workmen's Compensation Act, 1923.

E.P.F & M.P. Act, 1952

- Payment of Gratuity Act, 1972,
- Minimum Wages Act, 1948,
- Child Labour (P&R) Act, 1986,

The law which directly deals with the beedi workers are:

1. The Beedi and Cigar Workers (Conditions of Employment) Act 1966
2. The Beedi Workers Welfare Cess Act, 1976
3. The Beedi Workers Welfare Fund Act 1976

The salient features of the Acts are beedi and Cigar Workers (Conditions of Employment) Act, 1966.

It provides for coverage regarding daily hours of work, weekly rest, leave with wages, maternity leave, benefits and welfare amenities such as drinking water, toilet facilities, canteen, etc. Although the term worker encompasses home workers as well, in practice these provisions apply only to the factory/ common shed workers. The Act prohibits an employer or contractor from arbitrarily rejecting more than 2.5% of the beedis as sub-standard beedis. Rejection of 5% would necessitate making entries in writing, recording the reasons for rejection so that the workers have a record in writing. In practice however, the rate of rejection is higher. The Act does not apply to the occupier or owner of a private dwelling house involved in the manufacturing process with the help of his family or anybody who is dependent on him, provided the owner or occupier is not an employee of an employer to whom the Act is applicable. Also prescribed in the statute are measures to promote healthy working conditions of workers at workplace in terms of cleanliness, ventilation, first aid, etc.

The Beedi Workers Welfare Cess Act, 1976 aims to collect taxes by way of cess or by imposing excise duty on manufactured beedis.

The Beedis Workers Welfare Fund Act, 1976 was enacted with the objective to promote financial assistance to the workers. The Beedi Workers Welfare Fund Rules, 1978 stipulate that the owner of an establishment or a factory or contractor should maintain a register of works and furnish statistics and other information as required by the government from time to time. Employers are to provide photo identity cards to every worker. The main emphasis of the welfare measures is in the health sector as the beedi workers as a category of workers is involved in health hazardous occupations. Despite laws which seek to protect the interests of beedi workers, the real benefit does not reach the workers; the law is flouted in various ways and the workers are exploited. Helpless because of poverty and lack of awareness, they succumb to all atrocities. It is with the object of understanding the problems of women beedi workers and find out possible solutions that the NCW decided to hold public hearings at various places and have a first hand account/report from the workers themselves. Five public hearing were conducted, viz,- Ahmedabad (Gujarat), Nippani (Karnataka), Sagar (Madhya Pradesh), Tirunelveli (Tamil Nadu) and Warrangal.

Actual Scenario

Apart from these laws, there are other labour law legislations also which cover the welfare of beedi workers.

Actual Scenario

Inspite of the several legal implications in practice however, conditions continue to be far from satisfactory. Labour laws are evaded by the middlemen, contractors, manufacturers by resorting to various tactics. The photographs shown the real world work environment of the women beedi rollers in a nutshell:

- In view of the operation of middle men, no employer-employee relation is established.
- The conditions under which the women beedi rollers work is very poor and unhygienic.
- Most of them live in one small room where they do the beedi work as also cook, and sleep.
- Children are exposed to all the hazards of tobacco.
- The wages are not only not paid on time but not fully paid. The signatures are

obtained on an amount higher than the amount paid. Should any worker dare to challenge this, they are threatened and may lose work and hence whatever little they earn.

- Even very small girls- as young as 4, are engaged in the trade. They begin with unwinding of the thread which needs no expertise.
- Most of the workers are not given identity cards or other documents which are required for obtaining benefits under the law.
- There is an utter lack of awareness of the laws as well. However, even if some awareness is there, the industry being home based, the workers are scattered and collective action is difficult. The worst part however is that helplessness and poverty- with no alternative work prospects- impels them to suffer in silence.

The next section will dealt with the suggested policy frame work to curb the menace and to enhance the welfare of the poor women beedi rollers.

Policy Frame work to enhance the welfare of the women beedi rollers - Control Measures

Beedi manufacturing is the second largest industry in India. It provides employment to millions of women and children mostly from the poor socioeconomic strata. Considering the high content of nicotine and other chemicals in beedi tobacco (compared with cigarette tobacco), these workers are at an extremely high risk of developing systemic illness. Interventions are required to minimize tobacco exposure, create awareness of disease and provide medical help to minimize the deleterious effect of tobacco in beedi rollers. 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. There should be immediate enforcement of the provisions under the Beedi and Cigar workers (condition of employment) Act 1966, Bonded Labour System (Abolition Act) 1976, Child Labour Act 1986, Beedi Workers Welfare Fund Act 1976, and the Beedi Welfare Cess Act 1976 to improve the overall working conditions of the Beedi workers and give them their rightful benefits. 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. It is also suggested that the Integrated Child Development Services (ICDS) scheme and the Sarva Siksha Abhiyan programmes should be implemented in Beedi rolling areas to encourage Beedi workers to send their children to schools.Beedi workers can also be linked to vocational training institutes according to local market needs. The beedi cess collected by the government should be used for welfare measures and other benefits for beedi workers. Rehabilitation measures must keep the aspirations of the community in mind while shifting them to sustainable, remunerative micro enterprises. Alternative occupations must take into account the lifestyles of beedi rollers, level of skills, needs and constraints. There are several successful examples such as Self-Employed Women's Association (SEWA), Voluntary Health Association of India(VHAI)-Aparajita and other self help groups who are working in home based enterprises. Following need based vocational trainings, in a matter of eight to ten years, many of these self-help groups have successfully turned into independent, and profit-based entrepreneurs.

Conclusion

“After continuous beedi rolling by the women and children and exposure to tobacco, the skin on the beedi rollers fingertips begins to thin, and they are unable to roll beedis by the age of 45. They have to resort to begging as they know no other trade or occupation," said Binoy Matthew of the Voluntary Health Association of India (VHAI). Hence to rehabilitate a million of people in Tamilnadu this is the right time to implement the policy framework as a effective control measure to enhance the welfare of the women beedi rollers. The authors urged the government to take urgent measures to address the issue.

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