

Occupational Health Hazards of Women Beedi Rollers in Nippani Taluk, South India

Kalpana. I. Pattan^{1*}, Sridevi I. Puranik²

¹Department of Zoology, KLES G. I. Bagewadi College, Nippani, Belagavi, India

²Department of Zoology, KLES B. K. College of Arts, Science and Commerce College, Chikodi, Belagavi, India

Corresponding Author: kipresearch9@gmail.com

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Abstract— In this study, we surveyed 47 women beedi workers of Nippani, a place in North Karnataka of India - known for tobacco trade and industries. We found that this labor intensive task has led to enormous health conditions in the women involved in rolling the beedis manually. Respiratory problems like cough and throat burns were reported by more than 50% of women. The incidence of Orthopedic and Ophthalmic illness was also common. Other health conditions included GI problems, Giddiness and Headache.

Keywords— *Beedi-workers, Tobacco, Respiratory problems, orthopedic problems, Indian small scale industry.*

I. INTRODUCTION

A 'Bidi' also known as 'poor men's cigarette' is a type of cheap cigarette common in South Asia. It is made up of uncured tobacco rolled in a traditional leaf (*Diospyrox melanoxylon*) tied up on both ends with threads. It is popular among the rural population of India and neighboring countries and mostly consumed by lower economic groups like laborers, farmers, lorry drivers, masons and others. In India approximately 800 million bidis are sold per year. Beedi rolling is a popular small-scale industry in most parts of rural India and perhaps it is the biggest unorganized sector of the country. As each beedi is rolled individually, this is an arduous and labor intensive task. 90% of the beedi workers as reported in previous studies are women. Srinivasulu¹. These workers are mostly exposed to unburnt tobacco through nasopharyngeal and cutaneous routes. Bagwe and Bhisey² and Swami et al.³ Women beedi rollers who start their profession at a very early stage of life are exposed to tobacco dust for approximately 4 –10 h each day. Various studies in different populations have suggested a number of health abnormalities which include respiratory, dermatological, reproductive, gastrointestinal disorders, eye problems and postural pains. Nippani is a part of India that is one of the notable Tobacco producer and trade market. We conducted this study in the rural beedi workers of this place.

II. RELATED WORK

The objective of the present study is to investigate the Occupational health hazards of women beedi rollers of Nippani taluk.

III. METHODOLOGY

The study was conducted in Nippani, India. Forty-seven female beedi rollers, without tobacco smoking/chewing habits were monitored for occupation related exposure to tobacco flakes and dust. Relevant information was collected by visiting the house of each beedi roller. We also ensured that all the subjects did not suffer with any serious disease and were not on any medications. 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.

IV. RESULTS AND DISCUSSION

The socio-demographic profiles (Table 1) of women beedi workers reflect that most of the subjects (60%) are belonging to the age group between 40 – 60 years, 21% are in the age between 20 – 40 years and 19% are above the age 60 years. The education level of these women is below 10th class (60%), illiterate (20%), primary education (19%) and below 12th (9%). The family size is more than four (36%), four (30%), three (20%), two (9%), single (5%). The educational level of their children was much better (35%) graduation, 12th (33%), 10th (23%) and primary school (9%).

81% of women worked for organized sector, while the rest 17% worked in unorganized sectors. The women roll beedis at the rate of 500-600 (44%), 700-800 (30%), 900-1000 (24%) per day. They had set targets for rolling beedis per day, 40% women targeted for 1000 beedis per day, 33% targeted 500 beedis, 13% for 700 beedis per day. Time spent in beedi rolling each day was 8, 10, 12 and 15 hours for 70%, 9%, 18% and 2% of women respectively. The wages are paid on weekly basis and the rate per beedi is 1 paise (70%) waving a monthly income of 1000 – 2000 rupees (50%).

The survey unveiled that the women beedi workers faced many health problems. The women beedi rollers suffered from various health conditions like Respiratory (Figure 1), Orthopedic (Figure 2), Ophthalmic (Figure 3) and Neural effects (Figure 4). Ailments like Cough (58%), Burning throat (52%), Asthma (15%), Tuberculosis (12%) were common in respiratory problems. Orthopedic conditions included Body pain (70%), Posture defect (30%), Neck pain (62%), Joint pain (57%), Shoulder pain (65%), Cramps in arms (63%), Swelling of limbs (59%), Muscle atrophy (48%). Euphoria (77%) was a common ophthalmic condition seen in these workers, while blurred and poor vision were other signs. Constipation was reported in 80% workers, headache, giddiness and infertility were also found.

Discussion

The women beedi rollers are middle aged rural women with a poor educational background. This survey depicts that these women have taken up the work of beedi rolling from organized sectors in the surrounding area. The earnings from this occupation are low but the time and efforts put up by the laborers are highly efficient. The educational levels in their children are found to be better. Women are indulged in the work for 8 hours a day throughout the week. These workers have started the job at early stage of life, they are exposed to the ill-effects of tobacco exposure by touching it with bare hands and inhalation of the tobacco dust. They encounter postural defects due to longer duration of sitting in a same posture and also orthopedic problems like pain in arms, shoulder and joints. More than 50% of the women and their families suffered from respiratory problems like throat burning and cough. The symptoms may have been caused by the tobacco dust. Other studies by Valic et al⁴, Lander and Gravesen⁵, Kjaergaard et al.⁶, Mukhtar et al⁷, and Osim et al⁸ have also confirmed the Respiratory problems in workers occupationally exposed to tobacco. Other health conditions like gastrointestinal problems have also been encountered in the workers. This may be because nicotine is absorbed through the skin of the fingers and palm and distributed throughout the body. Nicotine excites the sensory nerves of the alimentary tract leading to increased gastrointestinal secretion. Toxic effects of nicotine on nerves have been well explained by Taylor⁹.

V. CONCLUSION AND FUTURE SCOPE

The study concludes that the incidence of Orthopedic and Ophthalmic illness was also common in the women employed as beedi rollers. Other health conditions included GI problems, Giddiness and Headache. Strict precautionary measures should be taken during the work hours to prevent severe diseases.

Figures and Tables

Table 1: Socio-demographic features of the beedi rollers in Nippani.

Parameter	Respondents (%)
Age	
Below 20	0
20 - 40	21
40 - 60	60
Above 60	19
Language	
Marathi	81
Hindi	17
Kannada	2
Religion	
Maratha	92
Muslim	6
Hindu	2
Education level	
Illiterate	20
Primary school	15
Below 10th	60
Below 12th	5
Graduation	0
Family members	
Single	5
Two	9
Three	20
four	30
more than four	36
Educational level of children	
Illiterate	0
Primary school	9
Below 10th	23
Below 12th	33
Graduation	35

Figures:

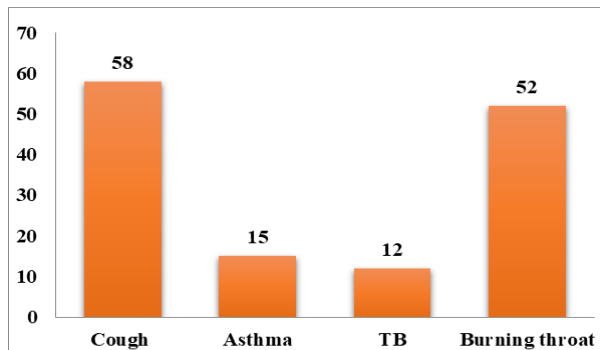


Figure 1: Respiratory problems in Beedi rollers.

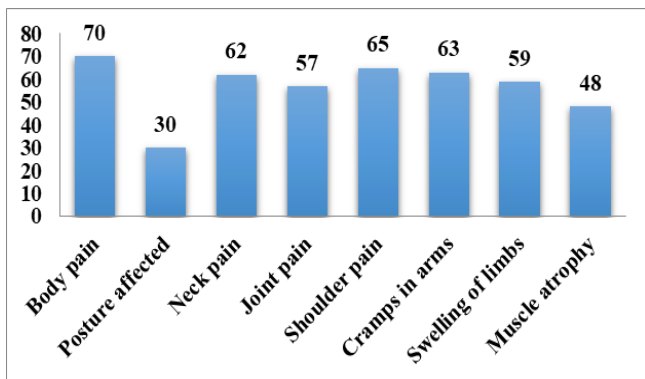


Figure 2: Orthopedic problems in Beedi rollers.

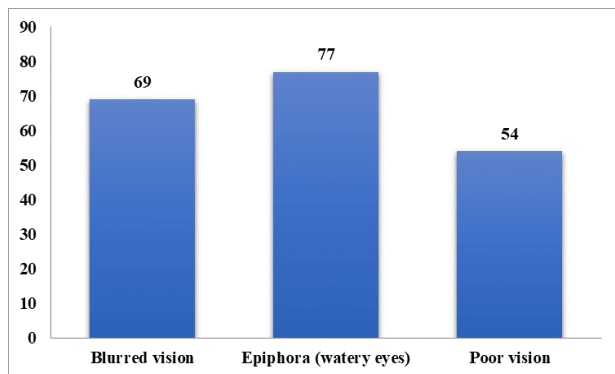


Figure 3: Ophthalmic Conditions.

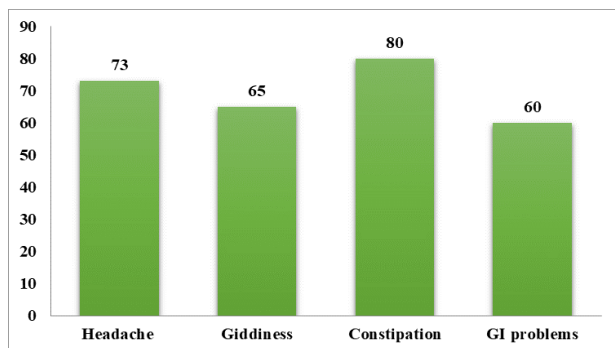


Figure 4. Neural Effects.

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AUTHORS PROFILE

Prof. Kalpana I. Pattan is M.Sc., M.Phil. from Karnatak University, Dharwad, Presently working as Professor of zoology at KLES G. I. Bagewadi College, Nippani, Belagavi, India. Prof. Kalpana has extensive research and teaching experience of more than 25 years. She has over 10 research papers to her credit. She has contributed to the scientific community at large and currently engaged in several research activities at various research institutes of India.

Prof. S. I. Puranik is M.Sc., from Karnatak University Dharwad, Presently working as Assistant Professor of Zoology at KLES B. K. College of Arts, Science and Commerce College, Chikodi, Belagavi, India. She has 9 research articles to her credit. She is engaged in several research activities in various institutes of India.