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Research Article

PREVALENCE AND RISK FACTOR'S FOR RESPIRATORY MANIFESTATIONS IN FEMALE BIDI WORKERS OF AJMER (ETHICAL COMMITTEE, NO. 2455-56/ACAD-III/MCA/2010)

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ABSTRACT
Socio-economic status is strongly associated with prevalence and social class differences contribute substantially to social inequalities in mortality. The main objective of our study was to screen for Respiratory symptoms and lung function impairment in female workers occupationally exposed to tobacco dust in a bidi industry. Two hundred female tobacco workers were included in this study. Acute and Chronic Respiratory symptoms were recorded in all tobacco workers. Lung function was measured by recording the maximum expiratory flow volume curves (FVC). There was a high prevalence of chronic respiratory symptoms among these workers. This prevalence was significantly higher in exposed female workers.

Key Words: *Respiratory Symptoms, Tobacco Workers*

INTRODUCTION
The truth about tobacco's health effects is simple. Tobacco products kill when they are used as intended. Tobacco affects the health of people who smoke and those who breathe in second hand smoke. With an increasing number of women working in and outside the home, the number of occupational diseases among women has risen. In general, women face the same type of dangers in industries as their male counterparts. The occupational diseases of women are therefore more dangerous, as they affect not only the present but also the future generations. The main objectives of our study were to screen respiratory symptoms and lung functions impairments in female workers of bidi industry of Ajmer district.

MATERIALS AND METHODS
Subject
Total 200 bidi workers were considered as the subject of this study. All belonged to low income group and working hours were long therefore, they were exposed to the danger of bidi tobacco. Subjects were divided into 2 major groups- tobacco users and non tobacco users.

Questionnaire Development
The questionnaire envisaged for use in this study had two components. The first part of the questionnaire was aimed at collecting information on respiratory symptoms. The second component was aimed at collecting information regarding demographic and environmental exposure factors influencing the prevalence of respiratory disorders.

RESULTS
Tobacco poses many health risks for human being's. The respiratory impairments associated with bidi making are given in the table-2.

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Table 1: Background of the respondents

S. No.	Information	Total Number of Bidi Workers	Tobacco Users	Non Tobacco users
1.	Total no. of respondents (Female workers)	200	100	100
Work Characteristics				
2.	Socio-economic status	Poor		
3.	Working years	5 to 40 yrs.		
4.	Working hours per day per labourer	2 hrs. (Minimum) 8-10 hs. (Maximum)		
5.	Bidis rolled per day	400-1200 per day		

Table 2: Respiratory impairments disorders in Bidi Workers

S. No.	Symptoms	No. of respondents	
		Users (%)	N.Users (%)
1.	Cough	10	8
2.	Breathlessness	22	28
3.	Facial swelling	18	15
4.	Anemia	11	28
5.	Anorexia	15	8
6.	Asthamatic Allergy	8	5
7.	Hemoptysis	9	5
8.	Dysphagia	7	3

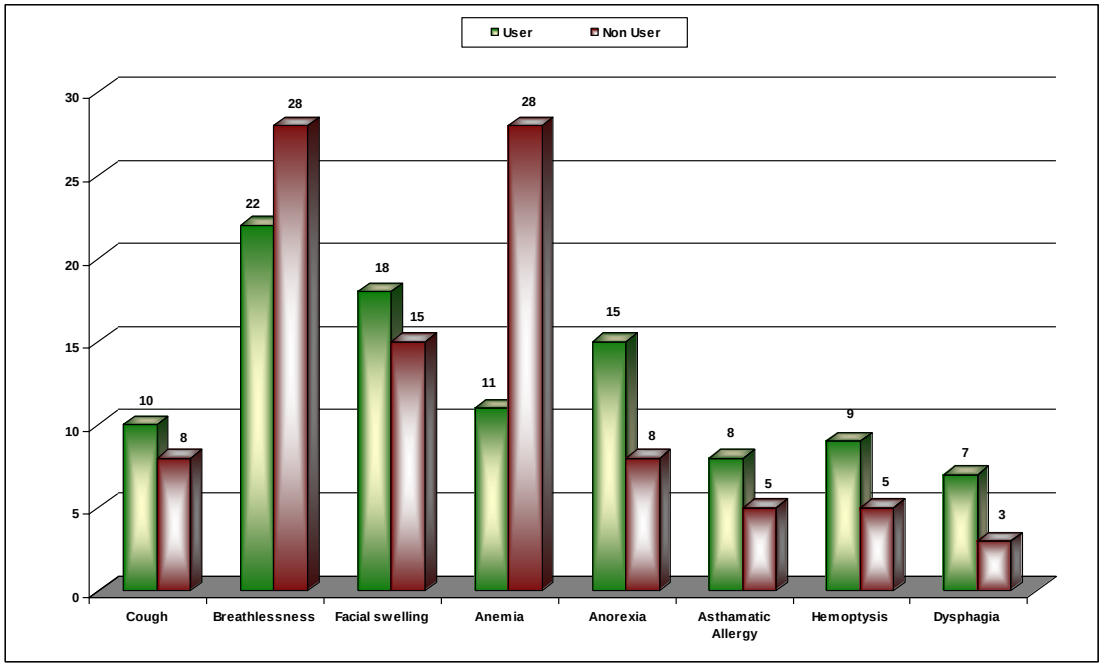

Figure 1: Correlation between bidi workers and respiratory impairments

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Results indicate that prevalence of Cough, facial swelling, hemoptysis, anorexia, disphagia, asthmatic allergy etc. are present in all these workers. The percentage of major respiratory disorders were greater in all tobacco users.

DISCUSSION

Occupational exposure to organic dust may harm the airways through their allergic components. User subjects are well known to be more likely to develop allergic diseases on exposure to organic allergens than non user's subjects. In addition to the allergenic property of the dust, contamination by microfungi is possible under certain conditions.

Previous investigations have found large no. of microfungi in the bidi industry and allergic asthma and alveolities have been described among tobacco workers (Falnder *et al.*, 1988).

The results indicate an association between chronic obstructive lung disorders and long term exposure to tobacco dust.

Our study suggests that employment in the bidi industry may be responsible for the development of adverse respiratory changes. A large no. of tobacco workers (females) complained of acute and chronic respiratory symptoms in this industry.

Among our tobacco workers (8%) were found suffering from occupational Asthma.

Viegi (Viegi *et al.,* 1986) showed a high prevalence of wheezing, shortness of breath, dyspnea, and rhinitis in cigar and cigarettes manufacturing workers.

Huuskonen (Huuskonen *et al.,* 1984) suggested that exposure to spores from different molds associated with the manufacture of tobacco products could induce symptom and signs of extrinsic allergic alveolitis.

Conclusion

Lower socio-economic status was associated with lower awareness of the harms of smoking and misunderstanding around nicotine. There is a need to improve knowledge of the dangers of smoking among the disadvantaged segments of the population. The respiratory impairments among the women labourers might be due to their exposure to the work environment. Continuous bidi rolling leads to nicotine directly through skin (The CNN freedom project, 2012).

Various welfare schemes are being implemented by the govt. for welfare of bidi workers in the field of health, education, housing, recreation and social security etc. Recently govt. has sanctioned 4 new hospitals and 40 dispernsaries for bidi workers. Govt. has also extended Rashtriya Swasthya Bima Yojna (RSBY) to bidi workers. (Ministry of Labour & Employment 12 Dec. 2011).

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