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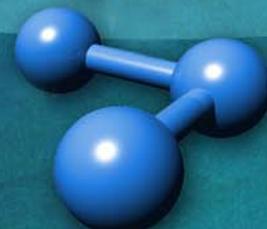
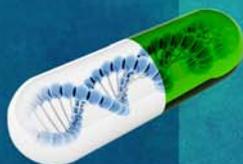
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Research Paper

ASSOCIATION BETWEEN OCCUPATIONAL TOBACCO EXPOSURE OF HEALTH HAZARDS IN WOMEN LABOURERS OF BIDI-INDUSTRY OF AJMER

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It is believed that health risks associated with smokeless tobacco use is lower than those with cigarette smoking, but the truth is that the production and consumption of tobacco products has alarmingly increased the health risks in human beings. In the present work, studies on 200 female bidi workers in Ajmer district, Rajasthan, India, was done to ascertain the effects of bidi rolling on health. There was a high prevalence of health manifestations among these women.

Keywords: Bidi, bidi-workers, health manifestations

INTRODUCTION

India is a diverse country, with marked regional variation in life-style. Among adults, most deaths are from respiratory, vascular or neoplastic diseases or from tuberculosis. The death rates from these diseases can be increased by the use of tobacco also. Tobacco is commonly consumed in the form of bidis, which are smaller than cigarettes and typically contain only about a quarter as much tobacco, wrapped in the leaf of tendu plant.

The present study aims to identify the effects of occupational exposure of tobacco on the general health of women labourers of Ajmer district, Rajasthan.

MATERIALS AND METHODS

Total 200 female bidi workers were considered as the subject of this study, actively involved in Bidi-rolling. The subjects were divided into 2 groups – tobacco users & Non tobacco users. A standard questionnaire related to health problems, tobacco use and smoking habit was used to observe the health hazards of female workers.

RESULTS

Tobacco pose many health risks for human beings (directly or indirectly). Our present study included 200 female bidi workers. Among these, 100 were tobacco users and 100 non tobacco users respectively. The demographic details and

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systemic features of 200 women labourers were given in tables 1 and 2.

Results indicate that prevalence of headache, nausea, irritation and dryness of throat,

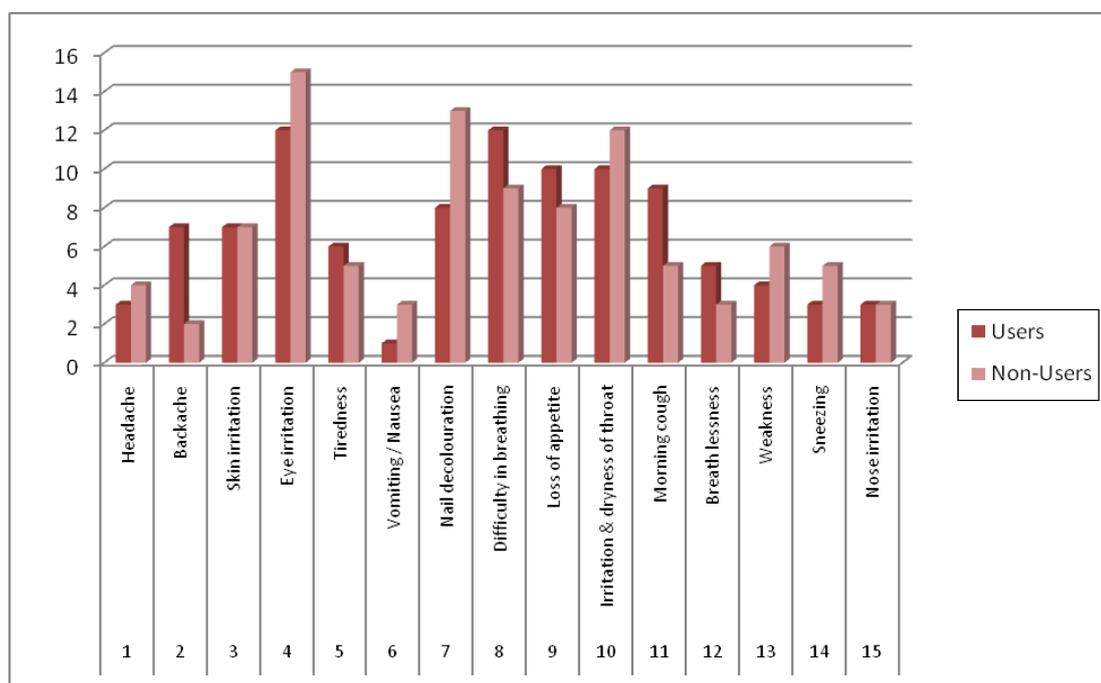
weakness, sneezing and nail decolouration were higher in non tobacco users because they are much more sensitive towards tobacco and its exposure than tobacco users.

Table 1: Background of the Respondents

Information	Total Number of Bidi Workers	Tobacco Users	Non Tobacco Users
(a) Total number of respondents (Female Labourers)	200	100	100
Work characteristics			
(b) Socio-economic status	Poor		
(c) Working years	5 to 40 yrs.		
(d) Working hours per day per labourer	2 h (minimum)		
	8-10 h (maximum)		
(e) Bidis rolled per day	400-1200 per day		

Table 2: Health Status of Women Labourers of Bidi-Industry

	Symptoms	No. of Respondents	
		Users	Non Users
1.	Headache	3	4
2.	Backache	7	2
3.	Skin irritation	7	7
4.	Eye irritation	12	15
5.	Tiredness	6	5
6.	Vomiting / Nausea	1	3
7.	Nail decolouration	8	13
8.	Difficulty in breathing	12	9
9.	Loss of appetite	10	8
10.	Irritation & dryness of throat	10	12
11.	Morning cough	9	5
12.	Breath lessness	5	3
13.	Weakness	4	6
14.	Sneezing	3	5
15.	Nose irritation	3	3

Figure 1: Correlation Between Bidi Workers and General Health Problems

DISCUSSION

Bidi manufacturing is the second largest industry in India (Shimkhada and Peabody, 2003). It provides employment to women and children mostly from the poor socio-economic strata (shimkhada and Peabody, 2003; Aghi 2003). Considering the high content of nicotine and other chemicals in bidi tobacco (compared with cigarette tob), these workes are at an extremely high risk of systemic illness (Malson *et al.*, 2001). Nicotine is the major component of tobacco. Tobacco has about 4000 active chemical compounds which includes nitrosamines, polycyclic aromatic hydrocarbon elements and cadmium (Robert, 1988).

Mittal (Mittal *et al.*, 2008) have theorised that ocular manifestations are also present in bidi rollers. The result of our study correlate well with his theory. Eye irritation was found in almost 13.5% of female Bidi workers.

The tobacco dust contains toxic substances. The dust mainly contain nitrosamines, which are readily absorbed by the body tissues like skin, respiratory epithilium and mucous membrane of Mouth, nose, etc. (Chattopadhyay *et al.*, 2006). The prevalence of cough with breathlessness, morning cough, difficulty in breathing etc.were higher in tobacco users, which is highly corroborated by the study result of Chattopadhyay.

CONCLUSION

Our conclusion is based on health hazards, so the subjects were aware about the harmful effects of tobacco use. There is a need to improve knowledge of the dangers of smoking among the disadvantaged segments of the population. Results of the present study prove that bidi tobacco is very harmful for the workers who actively or passively inhale tobacco during bidi rolling. The health impact on bidi workers is visible

on all age groups. 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 dispensaries for bidi workers. Govt. has also extended Rashtriya Swasthaya Bima Yojna (RSBY) to bidi workers. (Ministry of labour & employment, 12 Dec., 2011).

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REFERENCES

1. Karl L Yen M D, Elizabeth Hechavarria B A, Susan B Bostwick MD (2000), "Bidi Cigarettes: An Emerging Threat to Adolescent Health", *Arch Pediatr Adolesc Med.*, Vol. 154, No. 12, pp. 1187-1189.
2. Bidi Workers" – Ministry of Labour and Employment, 12 Dec., 2011.
3. Chattopadhyay B P, Kundu S, Mahata A and Jane Alam S K (2006), "A study to assess the respiratory impairments among the male bidi workers in unorganised sectors", Vol. 10, No. 2, pp. 69-73.
4. Govekar R B and Bhisey R A (1992), "Elevated urinary thioether excretion among bidi rollers exposed occupationally to processed tobacco", *Int Arch Occup Environ Health*, Vol. 64, No. 2, pp. 101-104.
5. Mittal S, Mittal A and Rengappa R (2008), "Ocular manifestations in bidi industry workers", *Indian J Ophthalmol.*, Vol. 56, No. 4, pp. 319-322.
6. Dionne Bunsha (2004), "No Industry, no Solapur", *Frontline*, Vol. 24, No. 22, Oct. 23 - Nov. 05.
7. Shimkhada R and Peabody J W (2003), Tobacco control in India. *Bull world health org.*, Vol. 81, No. 1, pp. 48-52.
8. The CNN freedom project: ending modern-day slavery- june, 2012.
9. Yasmin S, Afroz B, Hyat B and D'Souza D, (2010), "Occupational health hazards in women bidi rollers in Bihar, India".



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