



## To assess the impact of tobacco control interventions on smoking, and tobacco cessation

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### Abstract

**Introduction.** This descriptive study examined the benefits of a community-based, smoking cessation treatment program for employees of Mahindra Plant Nagpur.

**Methods:** A total of 159 employees (84 cell workers and 75 executives) participated in the program. Sessions were based on personal counseling, motivational lectures, Focus group discussions (FGD) and Community Group activities.

**Results:** Consumption of tobacco amongst cell members and officers was reduced appreciable. It was observed and stated by the employees that around 44 % of employees in both groups reduced their frequency of smoking and tobacco consumption by 50%. However around 14 % and 18% of employees amongst cell workers and executives respectively reported that they were consuming more than 50% but less than 100%. Similarly around 12% of employees in cell members and 17% in executives have successfully quit the tobacco.

**Conclusions:** Results suggests the benefits of offering smokers a well-structured smoking cessation treatments and assistance at workplace.

**Keywords:** tobacco, FGD

### Introduction

Tobacco is one of the leading causes of disease and death in the world. It is responsible for a range of respiratory, cardiovascular, and reproductive tract disorders in addition to cancer of different sites in the body. In India, tobacco consumption is widely prevalent and culturally accepted.

India is the second largest consumer of tobacco in the world. The prevalence of tobacco use among men has been reported to be high in most parts of the country. Research suggests that though 70% of tobacco users want to quit, only 3% are successful with will power alone. Tobacco users are in dire need of support while quitting tobacco due to the addictive nature of tobacco products. Therefore, there is need of community based tobacco cessation facilities, which are less stigmatized like workplace and so more easily accessible. Tobacco can be used in many forms such as cigarettes, cigars, bidis, creamy snuff (tooth paste), kreteks, pipes, gutkha, chewing tobacco, hand rolling tobacco, snuff, water pipes, snus and many more so it is very necessary to ban the use of tobacco products as well.

As per *WHO report 2015* it states that- It is very necessary to ban or stop the use of tobacco on global basis as it leads to many illnesses like Chronic Obstructive Pulmonary Disease (also called COPD), lung cancer, heart attacks, strokes, chronic heart diseases, emphysema, variety of cancers and etc. Hence, the present study was planned to develop an intervention program "Quit and Live: Chodo aur Jiyo" for promoting smoking cessation and to assess the effectiveness of intervention programs in smoking cessation among selected employees of Mahindra Plant Nagpur.

### Methodology

In the present study before – and – After without control experimental design was used.

Level of phenomenon Before treatment (X)	$\xrightarrow[\text{Introduced}]{\text{Treatment}}$	Level of phenomenon after treatment (Y)
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Treatment Effect= (Y) – (X)

The subject group consisted of all permanent employees of Mahindra Nagpur Plant. Since it is male dominant company as they manufacture tractors, female population in the Nagpur plant is only 30 against 3200 male members hence; female employees were not included in the study. A total of 552 subjects were selected through stratified random sampling technique, out of which 178 were executives and 374 were cell members

A pre structured and pretested performa was used to obtain data regarding knowledge, attitude and practice (KAP) of selected employees regarding tobacco and smoking consumption before and after the implementation health care initiatives.

The health care initiative, 'Quit and live' included:

1. Personal assistance: The selected subjects were sensitized to the hazards of tobacco consumption, monitored for tobacco usage and assisted to cope with nicotine withdrawal symptoms. A trained personnel gave personal assistance to the selected employees and trained them for different types of:
  - relaxation and coping techniques,
  - assertiveness skills and

- Relapse prevention techniques.
- 2. Motivational Lectures: Lecture sessions on different aspects of tobacco control were organized by an expert speakers.
- 3. Focus group discussions (FGD): Group discussion were organized among tobacco users on various issues like motivation, changing attitude, coping with withdrawals, relapse prevention, sharing of experiences etc.
- 4. Community Group activities: Activities like slogan and poem competition, debates, and feedback sessions were conducted for tobacco control.
- 5. Follow-up: Regular reminders in the form of phone calls and greeting cards with quit tobacco messages,

were sent to the tobacco users.

To assess the effect of, ‘smoking and tobacco cessation’ initiative on the selected employees, post intervention data was collected at the end of 12 months.

**Result and Discussion**

**Demographic profile of the subjects**

Age: Age is one of the most important non-modifiable risk factor for almost all lifestyle related diseases. Adoption of early healthy lifestyle changes prove to be beneficial for preventing life threatening chronic diseases. The below chart elicit the information on the distribution pattern of selected employees according to age.

**Table 1:** Distribution of selected subjects according to age.

Age (in years)	Cell members		Executive	
	No.	%	No.	%
20-25	35	9.4	7	3.9
25-30	37	9.9	17	9.6
30-35	19	5.1	25	14.0
35-40	55	14.7	28	15.7
40-45	102	27.3	20	11.2
45-50	75	20.1	38	21.3
50-55	38	10.2	25	14.0
55-60	13	3.5	18	10.1
Total	374	100	178	100

It can be observed from table 4.1, that highest percentage of employees amongst cell members were found in age range of 40 to 45yrs (27.3%), followed by 45 to 55yrs (20.1) and lowest percentage of cell workers were in the age group of 55 to 60yrs of age (10.2%).

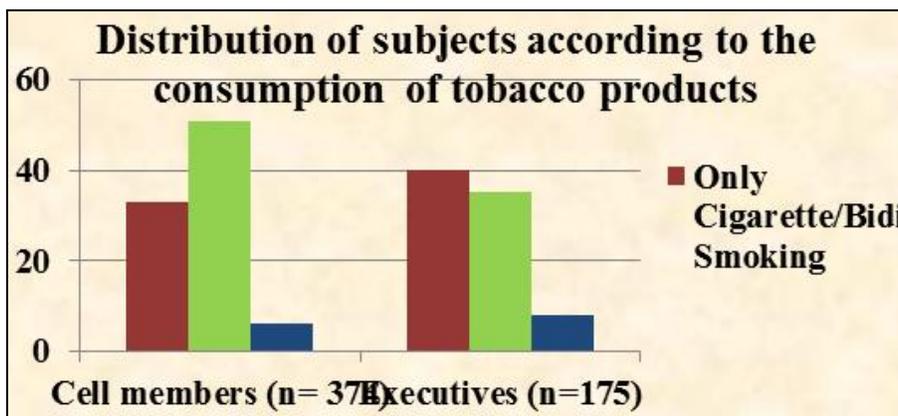
Similarly, among the executives category highest percentage was observed in 45 to 55 yrs (21.3%), followed by 35 to 40yrs (15.7%) of age group. Slightly more employees compared to cell members were found in age group of 55 to 60yrs (10.1%)

among executives.

To assess the prevalence of smoking and tobacco consumption among the selected employees of Mahindra was done through questionnaire was used to understand the details like since when the employees has the addiction of chewing tobacco, whether they are willing to quit tobacco and what kind of support they are expecting from the employer. Based on the information collected the selected employees were classified as under.

**Table 2:** Distribution of subjects according to the consumption of tobacco products

Tobacco Product	No. of employees consuming	
	Cell members (n= 374)	Executives (n=175)
Only Cigarette/Bidi Smoking	33	40
Only Tobacco chewing	51	35
Chewing tobacco and smoking both	6	8
Total	84	75



**Fig 1:** Distribution of subjects according to the consumption of tobacco products

It is important to mention that total of 84(22.5%) employees among cell members and 75 (42.1%) among officers reported to be having addiction of either smoking or tobacco consumption.

It can be observed from table 2, that among cell workers having addiction a higher percentage (60.7%) of employees had an addiction of chewing tobacco followed by smoking (39.3), while 7.1% among them were consuming both cigarette/bidi and tobacco.

Similarly among the officers having addiction of non-nutritional substances 46.6% had the habit of chewing tobacco and 53.3% had the habit of smoking cigarette or bidi. However, 11% had the habit of consuming both cigarette and tobacco.

**Table 3:** Distribution of subjects according to number of years of either smoking or tobacco chewing

Category	More than 5 years	More than 10 year	More than 15 year	Total
Cell members	20	30	34	85
Executives.	15	35	25	75

Table 3, illustrates that 20 (23.5%) cell workers were consuming tobacco or smoking since more than 5 years, 30 (35.3%) had addiction since 10 years and a higher percentage (40%) had been consuming tobacco or smoking since more than 15 years.

Similarly, a high percentage (46.7%) of selected executives were consuming tobacco product since more than 10 years. 15 (20%) and 25 (33.3%) of selected executives had been consuming tobacco products since 5 years and 15 years respectively.

**Implementation of ‘Tobacco and smoking cessation Program.’**

In the present study out of the total 550 subjects around 84 cell workers and 75 executives were either chewing tobacco or smoking as reflected from the data collected during health risk assessment. In the Quit tobacco initiative all employees were made compulsory to participate the program.

**Table 4:** Distribution of subjects according to enrollment for the program ‘Chodo aur Jiyo’

Variable	Cell Workers	Officers
Eligible Candidate (n)	84	75
Enrolled n (% of all eligible)	84 (100)	75 (100)

Table 4 indicates the number of employees enrolled for the quit tobacco program. In the present study of the total sample of 374 cell members and 178 executives, 22.5% cell members and 42.1% executives were chewing tobacco or smoking. In the Quit tobacco initiative all employees were made to compulsory participate the program.

**Table 5:** Enrolment of subjects in follow up sessions of education program

Category	After 4 months	After 8 months	After 12 months
Cell members (n=84)	80	78	70
Executive (n=75)	73	70	69

Table 5, shows that amongst the subjects enrolled initially 4.7% (4) members among cell members had quit the rehabilitation program by the end of 4 months and by the end of one year 16.6% (14) cell workers had withdrawn themselves from the cessation program.

Among the executives, 2.6% (2) members had stopped attending the program after the end of 4 months. At the end of one year 6 (8%) had stopped attending the motivational sessions and group discussion.

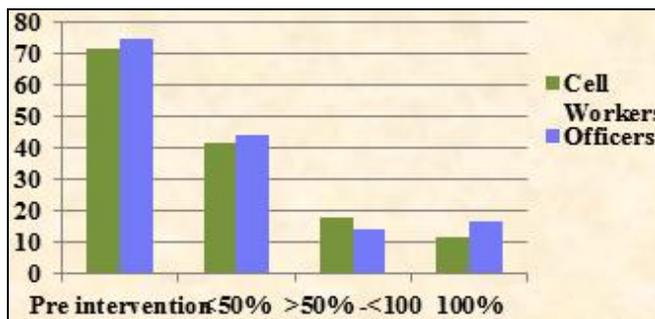
Similar study was done by Gupta *et al.* (1992), who reported that eradication of deep-rooted habit of tobacco would require concerted action resulting into a social change. Community education regarding tobacco and its health hazards would necessarily be an integral component of such an action plan.

Anti-tobacco education needs to be targeted at decision-makers, professionals and the general public, especially the youth. Efficacy of educational activities in tobacco cessation had amply been demonstrated by various organization Gupta *et al.* 1992

Social support for quitting, training of health professionals and integration of smoking cessation in other health programmes are essential for successful implementation of tobacco cessation programmes, as stated by Editorial board of [Indian J Chest Dis Allied Sci 2005; 47: 5-8]

**Table 6:** Effect of smoking cessation campaign on frequency of smoking and tobacco consumption among selected subjects

Category	Pre intervention	Smoking / Tobacco consumption		
		Post intervention percentage reduction in consumption		
		<50%	>50% -<100	100%
Cell Workers	72	42 (58.3)	18 (25)	12 (16.7)
Officers	75	44 (58.7)	14 (18.6)	17 (22.7)



**Fig 2:** Effect of smoking cessation campaign on frequency of smoking and tobacco consumption among selected subjects

It can be elicited from table 6 and fig. 2 that consumption of tobacco amongst cell members and officers was reduced appreciable. It was observed and stated by the employees that around 44 % of employees in both groups reduced their frequency of smoking and tobacco consumption by 50%. However around 14 % and 18% of employees amongst cell workers and executives respectively reported that they were consuming more than 50% but less than 100%.

Similarly around 12% of employees in cell members and 17% in executives have successfully quit the tobacco. Quitting of tobacco was self-reported.

It can be further concluded that education and lectures by

expert and support system through the management helped employees to reduce the smoking and consumption of tobacco products.

### Conclusion

Changes in work organization due to globalization among other factors have led employees to work longer hours which in turns affects the quality of their health. Analysis of results regarding efficiency of tobacco and smoking cessation program on quitting rate reveals that there was an impact of initiatives in reducing the frequency of smoking and tobacco consumption among selected subjects, thus concluding that there is a positive effect of smoking and tobacco cessation program; quit and live on quitting rate of selected employees.

### References

1. Gupta Mirsa R, Paisc Pastogid P, Guptad VP. Significance of various nutritional factors and other lifestyle variables in cardiovascular disease prevalence and mortality in India. *International Journal of Cardiology*. 2006; 108(3):291-300.
2. Huang SY, LI D, Wen CP, Tsai SP. Workplace smoking policies in Taiwan and their association with employees smoking behavior. *Eur Journal of Public health*. 2005; 15:270-275.
3. Hughes JR, Gulliver SB, Fenwick JW, Valliere WA, Cruser K, Pepper S. Smoking cessation among self-quitters. *Health Psychol*. 1992; 11:331-4.
4. Jha P, Jacob B, Gajalakshmi V, Gupta PC, Dhingra N, Kumar R. A nationally representative case-control study of smoking and death in India. *N Engl J Med*. 2008; 358:1137-47.
5. John RM, Sung HY, Max W. Economic cost of tobacco use in India, 2004. *Tob Control*. 2009; 18:138-43.
6. Karen Smith. The Wellness Council of America (WELCOA)- The promotion of worksite wellness and a wellness program within their organization.
7. Mishra GA, Majmudar PV, Gupta SD, Rane PS, Uplap PA, Shastri SS. Treating tobacco: Use Tobacco Cessation in India. *Indian J Occup. Environ. Med*. 2009; 13:146-153.
8. Murthy P, Saddichha S. Tobacco cessation services in India: Recent developments and the need for expansion. Proceedings of National Institute of Mental Health and Neuro Sciences, Bangalore, 2010.
9. William Bunn B. Effect of smoking status on productivity loss. *JOEM*, 2006, 48(10).