

Comparison between Effectiveness of Text and Pictorial Health Warnings of Tobacco Packages in Informing Tobacco Users about Risk of Oral Cancers

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Abstract

Background: Tobacco use continues to be the leading global cause of preventable deaths, killing nearly 6 million people worldwide each year. Tobacco control must be given high priority by scaling up tobacco control measures. In India under the Control of Tobacco Product Act, it is mandatory to keep the warning labels over all kinds of tobacco products to minimize the use of tobacco. **Objectives:** To determine whether tobacco packages with graphic warning labels or text-only warning labels had a stronger impact on addicting behavior. **Materials and Methods:** A cross-sectional study was carried out among the group of people using tobacco in any form. A total of 776 tobacco users were enrolled in the study. **Results:** The mean age of tobacco users was 41.4 years. Out of the total of 776 tobacco users, 561 (72.3%) had noticed warning signals over the tobacco products. Among those who had noticed warning labels, 64.4% became aware about health effects and 66% had thought to quit tobacco. Tobacco users of the young age group (15–45) were more aware regarding warning labels. Females were less aware. As the level of education increases the number of tobacco users who tried to quit or reduce the daily quantity of tobacco intake also increases. **Conclusions:** The positive impact of warning labels has been seen among the tobacco users who have noticed them. Not all tobacco users were aware regarding the presence of warning labels as per the findings of the present study.

Keywords: Awareness, impact, oral cancers, tobacco users, warning labels

INTRODUCTION

Tobacco is the prime and most perilous killer of humanity probably since its discovery. From all its care-takers in farms to stakeholders and mainly its users suffer from multiple health hazards the ultimate outcome of which is premature miserable death. Almost one million annual deaths from tobacco-related diseases occur in India, the world's second-largest consumer of tobacco, where about one-third of adults use some form of tobacco.

According to the Million Death Study, Smoking alone causes 10% of all deaths.^[1] One in five of all adult male deaths and one in twenty of all adult female deaths in middle age are due to smoking.

In India, around 34.3% of youths are exposed to passive smoking at home. Among Daily tobacco users, 60.2% consumed tobacco within half an hour of waking up.^[2] In India, beedi smoking is the most popular form of tobacco smoking,

followed by cigarette smoking. Paan with tobacco is the major chewing form of tobacco. Dry tobacco-areca nut preparations such as paan masala, gutka, and mawa are also popular and highly addictive.

Indian Parliament passed the Cigarette and Other Tobacco Products (prohibition of Advertisement and Regulation of Trade and Commerce, production, supply, and Distribution) Bill, 2003. One of the key provisions under this act is health warnings in both written and pictorial form. Health warnings on tobacco packages are among the most widespread policy initiatives implemented to raise awareness of the health risks of tobacco as well as to encourage consumers to

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quit. Communicating the health hazards of tobacco use is a primary goal for tobacco control policy. Warning labels on cigarette packages are meant to communicate such smoking-associated risks. When the tobacco industry bears printing costs, warning labels can be an extremely cost-effective educational intervention, especially when compared to other efforts, such as mass media campaigns.^[3] However, to be effective, warning labels should be prominent enough to capture smoker’s attention and must stave off the “wear-out” that results from habituation to messages.^[3] For this reason, the framework convention on tobacco control states that warning labels “should be 50% or more of the principal display areas but shall be no <30% of the principal display areas” and “may be in the form of or use pictures or pictograms.”

Research suggests that warning labels with prominent graphic elements are more effective than text-only messages in engaging smokers, promoting quitting, and impeding “wear-out” that results from habituation to messages. On September 27, 2012, India proposed a new round of picture warnings that were to be required as of April 1, 2013, although implementation of these warnings varied. A set of 3 new pictorial warnings were developed for smoked tobacco products, and a separate set of 3 new warnings were developed for smokeless tobacco products. Health warnings were required to cover 40% of the front of all cigarette packages.

On October 15, 2014, the government proposed larger warnings that cover 85% of the front and back of the pack. The larger warnings were initially scheduled to come into effect on April 1, 2015, but the deadline was extended until April 1, 2016.^[3]

Despite such efforts to inform consumers about the dangers of tobacco products, little is known to them about the content of or even the existence of warning messages. Little is known about the impact of pictorial warnings or health messages on tobacco products on people’s behavior. An analysis of the awareness of the presence of warning messages among tobacco users is important. Present study was conducted to know about the level of awareness about anti-tobacco warning labels, and to evaluate the most efficient method for spreading awareness regarding oral cancers among young tobacco users in Nagpur, Maharashtra.

Objectives

To review the knowledge regarding warning labels printed on tobacco products among tobacco users.

To evaluate which method has a better impact on spreading awareness regarding oral cancers.

MATERIALS AND METHODS

A cross-sectional study was carried out among the group of people using tobacco in any form. A questionnaire used for data collection was predesigned. Questionnaire was designed to collect information regarding sociodemographic profile of tobacco users, the pattern of tobacco use, and any kind of

awareness about warning labels either in written form or in pictorial form. It was pretested by carrying out pilot study. Modifications were made in the questionnaire based on the findings of the pilot study. The type of questionnaire was close-ended, which require yes or no answer. The data we collected were of qualitative type.

The sample size was calculated by using the following formulae:

$$\text{Sample size} = 4pq/L^2 \text{ (for 95\% confidence)}$$

where,

p is the prevalence of tobacco users (which was kept as 34% as per the recent “global adult tobacco survey (GATS) India” report.

$$q = 1 - p,$$

L = Allowable error, which was kept as 10% of P for the present study. Hence, it was 10% of 34 i.e., 3.4.

Hence, the calculated sample size was 576.4, to round about the figure it was taken as 576.

Thus, total of 576 tobacco users residing in the Hingna, Nagpur, were selected. A questionnaire was used for the data collection. Informed verbal consent was taken before data collection. Those who refuse to give consent were excluded from the study. The study was carried out between January and March 2020. Data analysis was done by using SPSS (Statistical Package for the Social Sciences) software version 2.0 owned by IBM, Chicago, U.S. The Chi-square test was used as a test of significance considering the data as qualitative.

RESULTS

Age-wise distribution

Total of 576 tobacco users participated in the study.

The maximum numbers of tobacco users (43.2%) were between 21 and 55 years. The mean age of tobacco user was 31.4 years with standard deviation of 10.6 years [Figure 1].

Sex wise distribution of tobacco users.

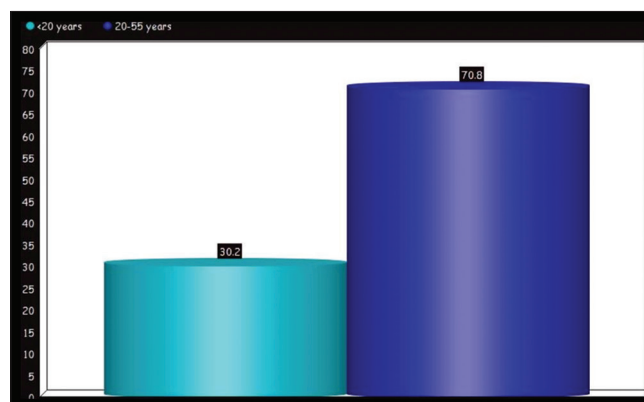


Figure 1: Age wise distribution of tobacco users

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Four hundred and thirty-seven (76.3%) were males, while 132 (23.7%) were female [Figure 2].

Distribution based on employment

Four hundred and eight (71.4%) were currently employed and 311 (1.4%) were unemployed [Figure3].

Distribution is based on the form of tobacco used (smokeless or smoking tobacco).

Out of 576, 385 (67.4%) were using the smokeless form of tobacco, while 161 (28%) were consuming tobacco by smoking. Twenty-six (4.6%) were consuming tobacco in both forms [Figure 4].

Smokeless forms of tobacco included Gutkha, Masala, and Snuff whereas smoking included bidi and cigarette, 311 (54.9%) were using tobacco in any form for more than 10 years.

One hundred and twenty (21.6%) had started using tobacco for <6 years. It was found statistically significant that the addicts using either smokeless form of tobacco alone or both smokeless and smoking form were more aware about

health-hazardous messages or pictorial warnings than the addicts who use smoking form alone [Figure 5].

Based on the warnings noticed by the tobacco users

Out of total 576 tobacco users, 414 (72.3%) had noticed warning signals over the tobacco products. On doing analysis, it was found that tobacco users of the young age group (15–45) were more aware regarding warning labels, whereas tobacco users from extremes of age were less aware about the same. Gender difference regarding awareness about warning messages was also statistically significant–females were less aware than males. Text-only warnings were perceived as less effective ($P > 0.001$). Graphic warnings ($P < 0.001$) were proven to be more effective rather than symbolic or testimonial warnings [Figure 6].

Based on literacy

Education wise comparison showed that literate tobacco users (62.3%) had more awareness towards the warning labels as compared to illiterate (23.3%) Findings were significant statistically. The positive impact of education was seen in the perception of warning signals. As the level of education increases the number of tobacco users who tried to quit the tobacco or reduced the daily quantity of tobacco intake were

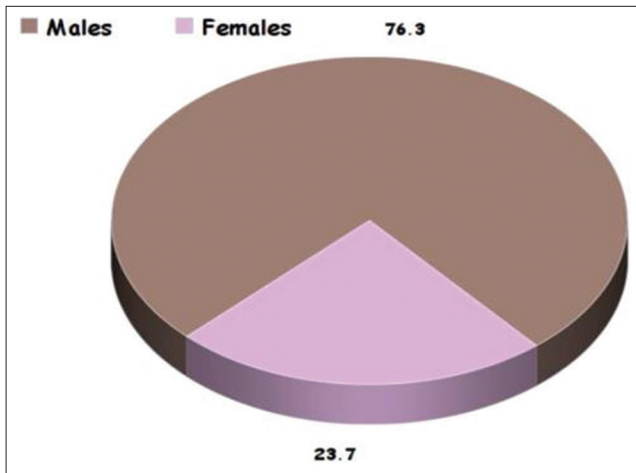


Figure 2: Sex wise distribution of tobacco users

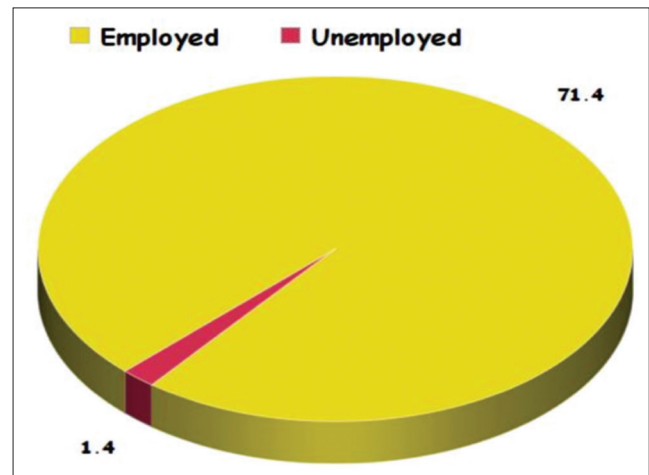


Figure 3: Distribution based on employed and unemployed

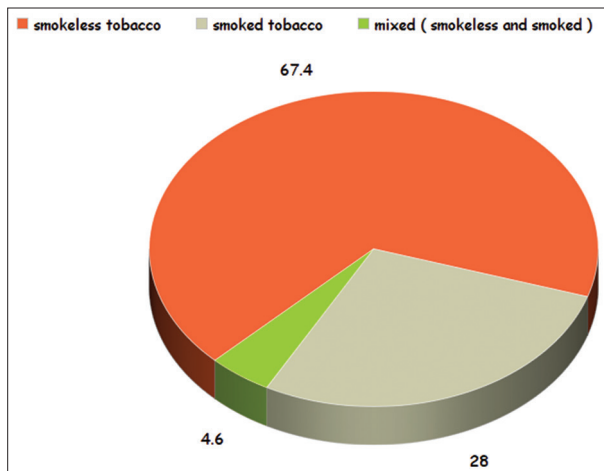


Figure 4: Distribution based on smokeless or smoking tobacco

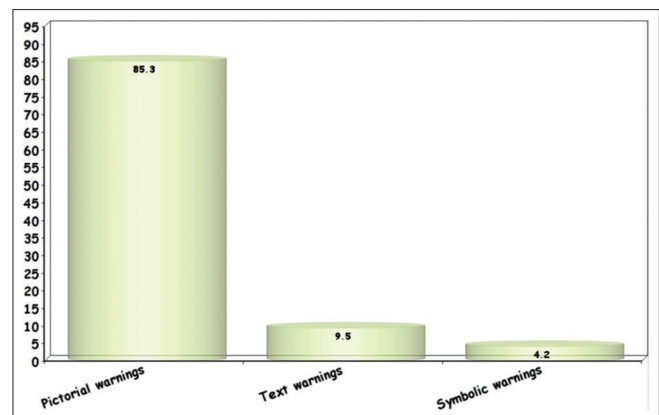


Figure 5: Based on the warnings noticed by the tobacco users

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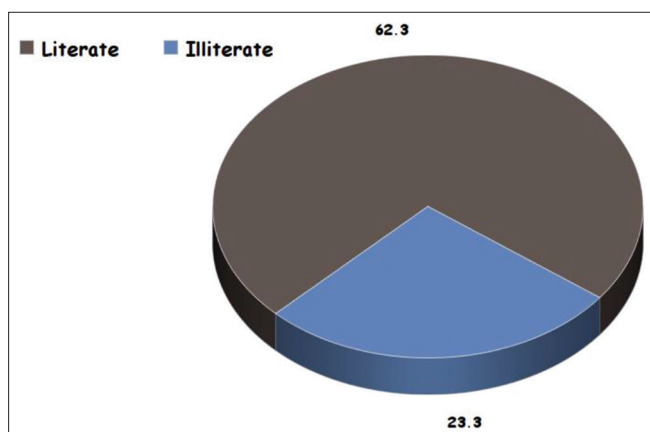


Figure 6: Based on literacy

also increases. They become more aware about the health hazards of tobacco.

DISCUSSION

Out of 776, 523 (67%) were using smokeless forms of tobacco including gutkha, masala, and snuff, while 217 (28%) were using consuming tobacco by smoking. Thirty-six (5%) were consuming tobacco in both forms. Our findings were similar to the findings of GATS^[1] who found that the majority of tobacco users (60%) consume only smokeless tobacco. In the present study, 426 (54.9%) were using tobacco in any form for more than 10 years. One hundred and sixty-eight (21.6%) had started using tobacco for <1 year. Out of the total of 776 tobacco users, 561 (72.3%) had ever noticed warning signals over tobacco products.

Warning labels do have an impact on changing behavior of tobacco users. In the present study, among those who were aware about warning signals, 82.2% said that they had reduced the quantity after seeing the warning labels, whereas 64.4% became aware about health effects and 66% have thought to quit tobacco. In India, three in five current tobacco users (61.1%) noticed the health warning on tobacco packages and one in three current tobacco users (31.5%) thought of quitting tobacco because of the warning label.

In the present study, it was found that tobacco users from the age group of 15–45, Males, better educational status, and lesser duration (<5 years) of tobacco usage were found to have a significant association with awareness about pictorial warnings on tobacco products.

Education positively impacts the perception of warning signals. In the present study 53.6% of illiterates were not aware about the warning labels. As the level of education increases the number of tobacco users with the positive impact of warning labels increases. In the present study, a group of tobacco users who

came in the category of graduate and above, had tried to quit, reduced the quantity and also became aware of health hazards.

CONCLUSIONS

Though being stamped as one of the most common killers, tobacco is still being used passionately by people, especially young ones. Throughout the world, almost all governments are making some form of legislation to increase the awareness about the health hazards of tobacco products and to decrease the number of deaths directly or indirectly consequence of tobacco addiction in any form. It was accomplished from the findings of present study that pictorial message/photographic material can convey the relevant message to illiterates as well as enhance the impact for those who are literate. Although some of the addicts are so ardent for it that they are overlooking any kind of health warnings or messages, still there are many who have tried to quit or at least reduced the quantity after seeing the warning messages over the tobacco products. It was also concluded that those using only smoking form of tobacco were having more awareness regarding tobacco warning signals. Apparently, it shows that tobacco users are presuming smokeless forms of tobacco as less hazardous and were not keen to pay attention toward health warnings. These results suggest that prominent warning labels with graphic elements appear to be a particularly powerful means of education and promoting smoking cessation. Furthermore, the use of images to express the consequences of smoking may be a particularly effective educational strategy where a sizeable proportion of the population is not literate and, therefore, unlikely to notice or understand text-based warnings.^[4]

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Jha P. The hazards of smoking and the benefits of cessation: A critical summation of the epidemiological evidence in high-income countries. *Elife* 2020;9:e49979.
2. Naeem Z. Second-hand smoke – Ignored implications. *Int J Health Sci (Qassim)* 2015;9:5-6.
3. Kaur J, Jain DC. Tobacco control policies in India: Implementation and challenges. *Indian J Public Health* 2011;55:220-7.
4. Hallit S, Layoun N, Malaeb D, Outayek M, Boueid MJ, Waked M, *et al.* The impact of textual and pictorial warnings on tumbac (waterpipe tobacco) boxes on the motivation and intention to quit waterpipe smoking in Lebanon: A cross-sectional study. *Environ Sci Pollut Res Int* 2019;26:36647-57.