

## The Adequacy of Pictorial Warnings to Combat the Tobacco Menace

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### ABSTRACT

The world is fast progressing in all fields including healthcare with newer treatment modalities, yet some life-threatening conditions persist. Squamous cell carcinoma of the aerodigestive tract is one such disease, its highest risk factor is tobacco consumption, by curtailing which we can save millions of people from gross morbidity and mortality. The Indian government has taken several steps to do the same. We in our study have aimed to assess the awareness of the ill effects of tobacco among its consumers in the vast majority of rural and suburban populations. We have tried to see how effective the pictorial warnings are as a deterrent and their impact on the consumers.

**Keywords:** Tobacco products; Pictorial warnings; Oral cancer; Tobacco and oral cancer; Cancer awareness; Oral squamous cell carcinoma

### INTRODUCTION

Tobacco consumption accounts to about 1 million deaths per year in India and studies say that 30% of all oral cancers are directly due to its ill-effects [1,2]. It is a preventable cause of morbidity and mortality and hence it is of utmost importance to curtail its use by educating the public [2]. The COTPA Act of 2003, which was passed by the Indian government, mandates that tobacco products be sold, supplied, or distributed in a packaging that clearly indicates the quantities of tar and nicotine. It is mandatory for cigarette packages to have graphic warnings, such as a skull or a scorpion, or specific language and graphic warnings. Following which it was further strengthened by amendments in 2020 and again in 2023 preventing sale in several public areas and not allowing advertisement on television and restriction of age of consumers to whom such products can be sold. But the actual understanding of these restrictions and how they benefit the public in suburban and rural areas who are the primary consumers is not well known [3-5]. Hence the present study was planned to evaluate the understanding among tobacco consumers on the implementation of pictorial warnings on tobacco product packing's and to compare the effectiveness of these warnings among individuals in a rural and suburban population of north Karnataka.

## OBJECTIVES

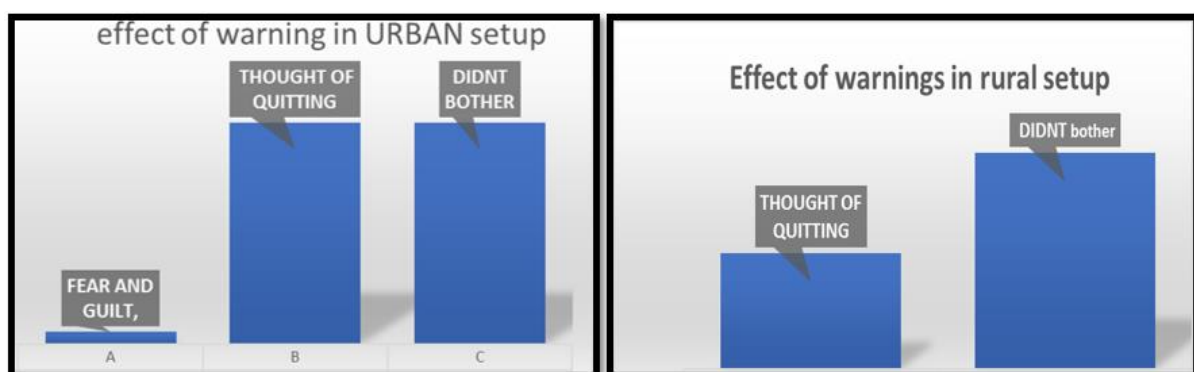
- To study the trend of tobacco consumption among subjects
- To assess the effectiveness of health warnings on tobacco products
- To find association between tobacco consumption and other demographic variables.

## METHODOLOGY

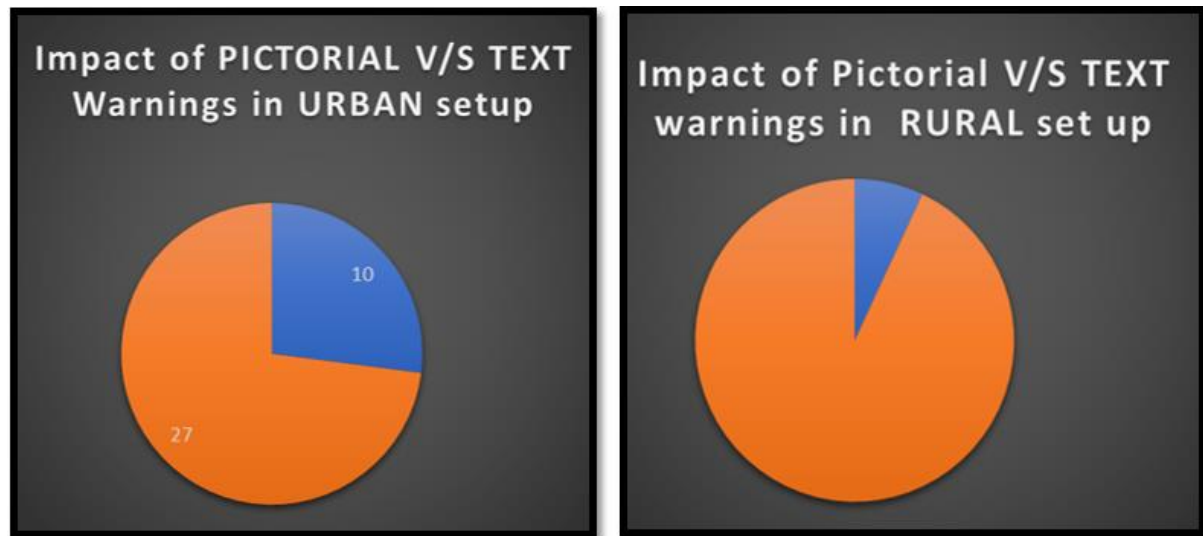
A cross-sectional community-based study was carried out. A sample size of 200 was chosen using statistical formulae. The study population comprised of all individuals who were above 18 years of age and had a history of tobacco consumption either past or present within suburban and rural north Karnataka. Those who already had premalignant lesions or diagnosed with oral SCC were excluded from the study. The study proforma was used to collect data from each subject after obtaining written informed consent. The proforma included demographic information, details of tobacco consumption habits, importance of health warnings and their interpretation which helped us to understand their awareness of the ill effects of tobacco and their interpretation of the warnings on various products of tobacco alongside through general and local examination of the subjects.

## RESULTS

It was found that 80% of tobacco consumers were male and 43.33% had been consuming tobacco for less than 5 years, while 27% of them having been doing it for more than 20 years. 43.33% consume cigarette while 40% have chewable form of tobacco. Graphic warnings made a better impact on 76.66% of people and 70% of them want the graphic warnings to cover more on the packs they strongly believed that many of the images on the warnings were deterrents. We found that the older concepts of using a scorpion or skull symbol on the cover of the products to symbolize “poisonous” nature of tobacco were insufficient and often misunderstood as a brand logo similar to several other products bearing animal logos and imprints. Whereas clinical images of those having oral cancer and their deformities were better understood and helped people refrain from using tobacco and gain the understanding that its consumption is harmful to life. The details of our results of study parameters and the effectiveness of pictorial warnings are shown in Figures 1 to 5 in the form of graphs and table.



**Figure 1 and 2:** The effect of the warnings among the urban and rural populations as expressed.



**Figure 3 and 4:** as shown in the above images we conclude that impact was greater with pictures in both urban and rural populations, the orange areas representing pictorial warnings and blue represents written.

	<u>URBAN POPULATION</u>	<u>RURAL POPULATION</u>
SEX OF CONSUMERS	78.37%=M	90%=M
TREND IN FORM OF CONSUMPTION	64.86% SMOKED	98% SMOKELESS
REASON OF STARTING TOBACCO	40.54% DUE TO FRIENDS COMPANY	41.46% DUE TO WORK PRESSURE
AWARENESS AMONGST PEOPLE REGARDING TOBACCO RELATED HARM	95%	78%
EFFECT OF WARNINGS	48.64% THOUGHT OF QUITTING	63.41% DIDIN'T BOTHER MUCH
MORE IMPACTFUL	73%=GRAPHIC WARNINGS	91%=GRAPHIC WARNINGS
WARNINGS TO BE IMPROVED	40.54%	9%
REASON FOR QUITTING	73%= REALIZED THE ILL-EFFECTS OF HEALTH	ONLY 5 QUIT WHEN THEY REALIZED THE ILL-EFFECTS

**Figure 5:** Shows the results compared between the urban and rural populations.

## DISCUSSION

It has been established that tobacco usage contributes to the development of upper aerodigestive tract tumours primarily oral squamous cell carcinoma [6,7]. According to research that has already been done, tobacco smoking can change the epigenetic makeup of oral epithelial cells, impede several of the host's systemic immunological activities, and promote squamous cell carcinoma by oxidative stress on tissues due to its toxic metabolites [7-9].

Other studies done in parts of India and the west also had similar outcomes with respect to need for larger images rather than symbols or written warnings [9-11].

## CONCLUSION

Pictorial warnings being self-sufficient made a deeper impact on people irrespective of their literacy status therefore their use must be enhanced and endorsed by all tobacco product manufacturers. The size of the images and its presence on all sides of the packages is also essential. Most products had warnings in English, which was not comprehensive to our study population. As physicians and otorhinolaryngologists we come across oral cancers and premalignant lesions almost daily at our practice, so it is important for us to understand how aware our patient population is with regards to health and we too must join hands to help spread the word as much as possible to ensure reduction in the burden of diseases caused due to consumption of tobacco products, as prevention is far better than cure.

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