

RESEARCH COMMUNICATION

Are Current Tobacco Pictorial Warnings in India Effective?

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Abstract

Background: Warning labels on tobacco products provide an effective way of communicating the consequences of tobacco use. Research has shown that larger and colorful warnings placed on packaging are more effective for informing consumers and general public. However, primarily due to powerful lobbying by the industry, pictorial health warnings in India experienced constant delay in introduction and dilution of content. The current warnings appearing on tobacco products consist of drawing of a scorpion on smokeless forms of tobacco and pictures and X-rays of diseased lungs for smoking forms. **Methodology:** To understand people's attitude towards the pictorial warning and their understanding of the pictures, a study was planned in two phases. The first phase was qualitative with focus group discussion and second, a population based survey for validating the findings. **Results:** The findings of the study suggested that the mandated pictorial warnings do not serve the desired purpose since they are not properly understood. The scorpion becomes associated with the product in a non-scientific manner. X-rays of lung are hardly understood by anybody and pictures of diseased lungs are not used by tobacco manufacturers. **Conclusion:** The results of both the focus group discussions and the field survey indicate that most people have seen text and pictorial warnings on smokeless and smoking tobacco products, but that they lack relevance to the text messages. Irrespective of education the early proposed pictorial warnings by the government were more effective than the currently implemented warnings. People would like to see the warnings mainly in Hindi and Marathi (local language) and want them to be placed on the top or middle of both sides of tobacco packaging.

Keywords: Health warnings in India - tobacco product packages - ineffectiveness

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Introduction

In India, at least 800,000 deaths every year are related to tobacco use, out of which 700,000 are related to smoking (Reddy and Gupta, 2004). About 10 million deaths annually are expected around the world by 2030. (World Health Organization, 2006) The tobacco usage in highly complexes in India as tobacco is consumed in a large number of ways in different parts of the country.

Warning labels on tobacco products are an effective way of communicating the consequences of tobacco use and bring about behavioral changes like quitting and reducing the tobacco consumption (Fong and Hammond, 2009). Research studies in developed countries have shown that large and colorful and scary images warnings placed on the tobacco products are more effective in informing consumers and nonusers (Pan American Health Organization, 2009).

In India, warning on tobacco products is mandated under The Cigarettes and Other Tobacco Products (COTPA) (Prohibition of Advertisement & Regulation of Trade & Commerce, Production, and Supply & Distribution) Act, 2003. The current health warning appearing on tobacco products consist of a drawing of

scorpion on smokeless form of tobacco and a picture of diseased lungs or a X-ray of lungs with cancer for smoked form of tobacco. To understand people's understanding of attitude towards the pictures in the pictorial warning, a population based study was planned with the help of focus group discussions and field survey on pictorial warnings in Mumbai, India.

Materials and Methods

Focus group discussions

Total four focus group discussions were carried out in August and September 2009. The participants were from Mumbai city and they were segregated into 4 different classes as low socio-income group, professionals and high educational group, youth (college students) and women group.

A moderator's guide was prepared to serve as a resource manual for group discussions. The guide incorporated a set of instructions to be followed by the moderators and the topics to be covered by them during the focus group discussion. The themes identified were whether they have seen any text or pictorial warning on tobacco product, message communicated through each

warning labels and a need for having warning label. Participant opinions were probed by asking them about the position, size, language and color of the warning label which can be useful. A separate form was prepared which covered the general information about the participants. Information such as his/her age, whether he/she is a smokeless tobacco user / smoker / mixed user / past user / never user. A brief introduction about the organization and about our study was provided. Their consent was taken for audio recording of the session for future reference and also an independent observer took notes of the each focus group discussion.

Field Survey

A close ended questionnaire was designed and structured based on the findings from four focus group discussions. The field survey was carried out between Octobers to December 2009. Participants were selected from different parts of Mumbai i.e. main city, central and western suburb. Field investigators were trained to administer the questionnaire. The survey was conducted house to house with face to face interview. Pictures (Figure 1 given below) of three mandated pictorial health warnings were shown to the participant to understand their opinion on the message conveyed and their perceptions of the warning labels. The three labels and two warnings labels proposed earlier by the government were shown for comparison to the participants at the end of the questionnaire to understand which of the warning labels were more informative in communicating the health effects of health warnings.

Results

Focus Group Discussion

Majority of the participants said that they had seen the health warning on tobacco product. About specifics, their response was that smoking is injurious to health & tobacco causes cancer. Most of the participants knew that it is mandatory to have warning labels on tobacco products as it makes both the users and non users aware about the harm associated with tobacco. Participants responded that it is better to have picture rather than text, as illiterate who use tobacco can easily relate the picture with the harm due to tobacco use.

About the scorpion picture (Figure A) responses was a new brand of tobacco product, a company’s logo, decorative modification on a tobacco packet, zodiac sign, slow poison which the scorpion bite represents and some said that there is scorpion inside the packet and it will stay in your mouth. Very few thought that it represent cancer.

When probed about the effectiveness, most of the participants thought that it is very ineffective as a warning label. The illiterate could not find any association between the picture of scorpion and the tobacco use. Although few did mention that it is better than to only have text.

When probed about warning label Figure B (X- ray of diseased lung) responses were waterfall between two mountains, a butterfly, a hazy shadow of two persons talking to each other, a body part with cancerous growth and small intestine of the body. Majority of the participants

Table 1. Demographics of Subjects

Variables	Men	Women	Total	
	459 (74.6)	156 (25.4)	615 (100)	
Religion	Hindu	268 (58.4)	80 (51.3)	348 (56.6)
	Muslims	76 (16.6)	12 (7.7)	88 (14.3)
	Christian	23 (5)	24 (15.4)	47 (7.6)
	Buddhist	90 (19.6)	40 (25.6)	130 (21.1)
	Jain	1 (0.2)	0 (0)	1 (0.2)
	Others	1 (0.2)	0 (0)	1 (0.2)
Education	Illiterate	69 (15)	25 (16)	94 (15.3)
	Primary	103 (22.4)	42 (26.9)	145 (23.6)
	Secondary	154 (33.6)	50 (32.1)	204 (33.2)
	Higher sec	64 (13.9)	20 (12.8)	84 (13.7)
	Undergraduate	23 (5)	3 (1.9)	26 (4.2)
	Graduate	44 (9.6)	14 (9)	58 (9.4)
Tobacco Users	Postgraduate	2 (0.4)	2 (1.3)	4 (0.7)
	Smoker	136 (29.6)	0	136 (22.1)
	Smokeless	148 (32)	53 (39.1)	201 (34)
	Mixed	19 (4.1)	0	19 (3.1)
Never User	156 (34)	95 (60.9)	251 (40.8)	

could not relate this image with tobacco. They said this image is dull, hazy, unclear and not colored. Only literate could think of relationship between tobacco and cancer by relating picture to the text warning.

When asked about the (picture of diseased lung) Figure C almost all the participants said that they haven’t seen such pictorial warning on any tobacco product. Some said it is a liver which is red, some said it is a burned leaf & some said it looks like a butterfly. Only one participant could identify it as a lung cancer. Majority of the participant said that this image is more effective than the previous two because this is clear and colored.

Discussion

The sample size was 615 individuals (18 years and above), selected from different locations in Mumbai.

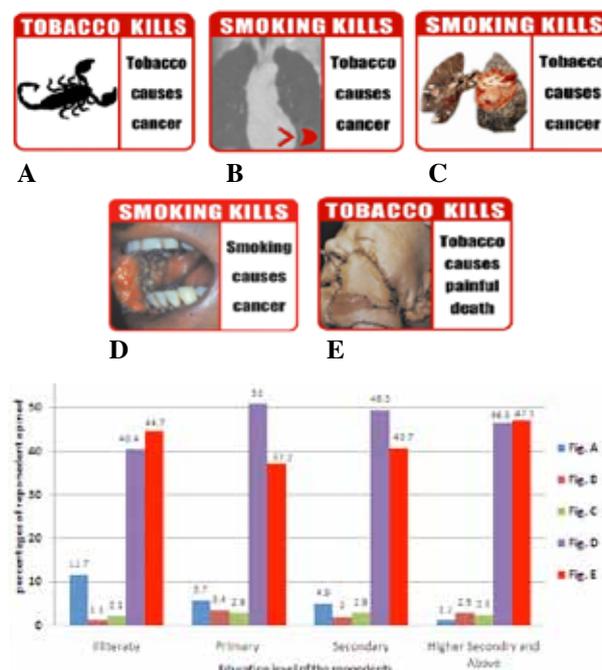


Figure 1. Images on Tobacco Products Shown to the Participants and Responses

Table 2. Warning Labels and Level of Education

Responses	Education Wise				Total n (%)	Chi Square Test X ²
	Illiterate n (%)	Primary n (%)	Secondary n (%)	Higher Education n (%)		
Read any text warning on smokeless tobacco product						
Yes	24 (25.5)	67 (46.2)	104 (51)	85 (49.4)	280 (45.5)	X ² (3)= 18.67, p=0.000
No	70 (74.5)	78 (53.8)	100 (49)	87 (51.6)	335 (54.5)	
Read any text warning on smoked tobacco product						
Yes	11 (11.7)	65 (44.8)	128 (62.7)	125 (72.7)	329 (53.5)	X ² (3)=102.82, p=0.000
No	83 (88.3)	80 (55.2)	76 (37.3)	47 (27.3)	286 (46.5)	
Seen any pictorial warning on smokeless tobacco product						
Yes	45 (47.9)	87 (60)	155 (76)	136 (79.1)	423 (68.8)	X ² (3)= 73.88, p=0.000
No	49 (52.1)	58 (40)	49 (24)	36 (20.9)	192 (31.2)	
Seen any pictorial warning on smoked tobacco product						
Yes	26 (27.7)	68 (46.9)	141 (69.1)	129 (75)	364 (59.2)	X ² (3)=37.7, p=0.000
No	68 (72.3)	77 (53.1)	63 (30.9)	43 (25)	251 (40.8)	

Among them 59.2% were ever tobacco users and 40.8% were never tobacco users. Table 1 describes the demographic characteristic of the participants based on religion, education and tobacco use.

About 53.2% males and 23.1% females had read textual statutory warnings on smokeless tobacco products whereas 62.7 % of male and 26.3 % of females had read text or statutory warnings on smoked tobacco products.

About 68.8% of male and 30.8% of females had ever seen any pictorial health warning on smoked tobacco products. Similarly 76% of males and 47.4 % of females had ever seen pictorial health warnings on smokeless tobacco products. There was no difference across the religion in relation to viewing text or pictorial warning on both smoked and smokeless tobacco product.

Table 2 describes the association between text or warning labels with education. When stratified based by education only 25.5 % and 11.7% of illiterate had read text or statutory warning on smokeless and smoked tobacco product. About 47.9 % and 27.7% of illiterate has seen pictorial warning on smokeless and smoked tobacco product. Even among literate pictorial warnings are seen more often than the text warning.

When probed about the message conveyed by the image on tobacco products, it seems that most didn't understand the image of X-ray lung and diseased lung whereas the picture of scorpion conveyed some message but in a non scientific manner.

When asked about the pictorial warning which is most informative in conveying the harms associated with tobacco (Figure 2), almost 47.6% of the participant said that figure D(mouth cancer) as most informative among all the warning labels. Across the education level the warning labels proposed early by the government was much more informative as compared to the current health warnings. The warning label of scorpion seems more informative among illiterate but it was understood in a non scientific manner.

About 45.5% of the participants opined that these pictorial warnings should be on top and the front surface of tobacco products and 39% of people opined for middle place on the front surface of tobacco products. About 94.8% of people opined that these images should be of larger size than present size of pictures on tobacco products. When asked about the language printed on

tobacco products, 73 to 75% people prefer the warning message to be in local language (Marathi and Hindi respectively). Combination of text and picture was said to be a must and some participants suggested text in red as red represented danger. Also 93% of people suggested that these images should be on both side of tobacco product.

The results of both focus group discussion and field survey gives sufficient evidence that the current warning labels are very weak and ineffective. This study supports the earlier done by Raute et al., (2009) that the early proposed warnings by government were effective and were as per the international standard. Further studies done by Arora M in five states of India (Delhi, Himachal Pradesh, Rajasthan, Mizoram, Tamil Nadu) found that the current health warnings were ineffective. The study showed that more than 63 percent of the respondents felt that the warning labels were inadequate in conveying the adverse impact of tobacco use on health.

Extensive research in Canada suggests that larger (> 50% of the surface of principal display area) and strongly worded health warnings, supported by emotionally strong graphics, are highly effective in tobacco control. (Enviro-nics Research Group, 1999; Shanahan and Elliott, 2000)

The size, position and more informative and scary graphic pictures are needed for the warning label to be effective as opined by the participants. Different ideas were given by the participants when probed on how to make warning effective. Most of the participants responded that the; human body picture should be displayed which can be easily understood even by a laymen, some said that picture showing mouth cancer, human face with half side normal and other half diseased, body part with the text return on it stating the body part and the diseased condition would make warning labels more effective.

The warning should have an annual rotation with newer warnings setting in as per WHO- FCTC (2003). The new pictorial health warnings that were to be implemented from 1st June, 2010 (Ministry of Health and Family Welfare, 2010) was a picture of mouth with stained teeth and few ulcers on the lower lip but it was deferred from implementation further by 6 months to 1st December 2010 (Ministry of Health & Family Welfare, 2010). It is estimated that 5,500 adolescents start using tobacco every day in India (The global Youth Tobacco Survey

Collaborative Group, 2002) Such a delay is adding a heavy toll as more tobacco users would have quit if the warnings would have commenced quite earlier. Additionally there needs to be a series of pictorial warning rather than a single picture on all tobacco products.

In conclusion, the results from the field survey indicate that most of the people have seen text and pictorial warnings on smokeless and smoking tobacco products. Mandated pictorial warnings do not serve the desired purpose since they are not properly understood. Scorpion gets associated with the product in a non-scientific manner. X-ray lung and diseased was hardly understood by anybody. People would like to see the warnings mainly in Hindi and Marathi (local language) and want it to be placed on top or middle of both side of tobacco packet. The newer picture of cancerous mouth seems to be relatively effective than the current warnings was delayed from implementation.

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