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Ineffective Pictorial Health Warnings on Tobacco Products: Lessons Learnt from India

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Summary

Pictorial warnings are effective in promoting smoking cessation as shown by research in the developed countries. This study aims to determine perceptions of Indians about the effectiveness of pictorial health warnings on tobacco packs which existed from May 31, 2009, to December 1, 2011. A cross-sectional survey was undertaken in five states of India with 1897 participants (56% males; 54% tobacco users). More tobacco users expressed that the pictorial warnings are inadequate to convey the health impact of tobacco use when compared with nonusers (71.50% vs. 62.75%; $P < 0.001$). More illiterates when compared with literates expressed their concern that the current pictorial warnings will not motivate them to quit (61.17% vs. 51.01%; $P < 0.001$). The new warnings implemented from December 1, 2011, in India are also not field-tested. Field testing and assessment of effectiveness of health warnings should be a mandatory requirement for Parties reporting on Article 11 of Framework Convention on Tobacco Control (FCTC).

Key words: Cross-sectional study, Health warnings, Product labeling, Smoking, Tobacco

Research has established that pictorial warnings are effective in promoting smoking cessation among users,¹ informing people about adverse health consequences of tobacco use,² and arousing negative emotions such as fear and disgust.³ An opinion poll conducted in four major cities of India before the implementation of pictorial health warnings in India revealed an overwhelming support (99%) of Indians for large pictorial health warnings on all tobacco products.⁴

Section 7 of Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade

and Commerce, Production, Supply and Distribution) Act (COTPA) in India requires all tobacco products to bear pictorial warnings and its rules prescribe covering 40% of the principal display area of the front panel of the tobacco pack. Most of the guidelines prescribed under international best practices have been followed in implementing Article 11 of the Framework Convention on Tobacco Control (FCTC) (Packaging and labeling) in India,⁵ but the warnings fail to bring about a desired impact.⁶

The pictorial health warnings that were notified first in July 2006 in India were field-tested and found to be effective. However, under pressure from the tobacco industry, these warnings were replaced by evasive, smaller in size, and nonfield-tested pictorial warnings introduced since May 31, 2009 [Figure 1a]. The Government notified a set of new pictorial health warnings on May 27, 2011 [Figure 1b]. Although stronger than the previous warnings, these are also not field-tested and have been introduced from December 1, 2011.

This study (a) describes the perceptions of both tobacco users and nonusers about the effectiveness of pictorial health warnings on tobacco packs introduced as on May 31, 2009; (b) emphasizes the importance of field

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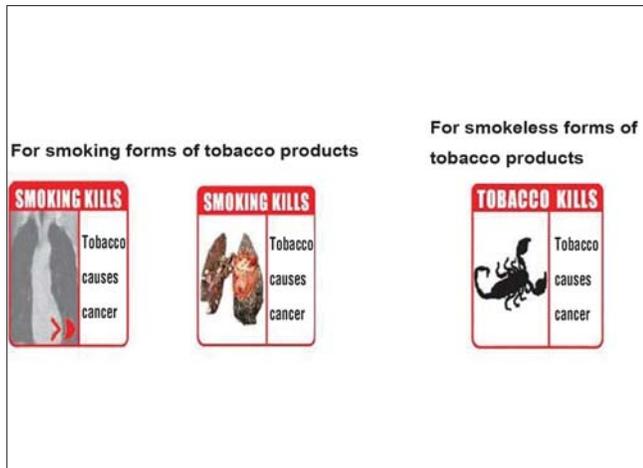


Figure 1a: Pictorial health warnings displayed on all tobacco product packs in India from May 31, 2009

testing of warnings before enforcement; and (c) provides insights for other developing countries working toward introducing health warnings in their countries and the international tobacco control community.

This cross-sectional study was conducted in urban areas of five states in India, namely, Delhi, Uttarakhand (Dehradun), Haryana (Rohtak), Uttar Pradesh (Lucknow), and Tripura (Agartala) in July 2009, a month after introduction of pictorial health warnings in the country. This study used a purposive sampling technique (quota sampling),⁷ to ensure equal representation of males and females as well as tobacco users and nonusers in the study, as the intention was to explore perceptions by gender as well as by tobacco use status. An interview schedule adapted from the ITC four country studies was administered among 1897 participants who agreed to participate in this study.⁸

The interview schedule included sociodemographic and tobacco use-related questions. In addition, respondents were asked to report whether they had observed changes in warning labels on tobacco packs. Those who reported having noticed such changes were asked to specify whether they had specifically observed inclusion of pictures/graphics in the warnings, inclusion of specific text messages in the warnings, greater area covered by the warning on the pack, all changes together, or any other changes. The schedule also included items for assessing perceptions of respondents with regard to effectiveness of pictorial health warnings.

Data analysis: Least square means and 95% confidence intervals were calculated using SAS/STAT Proc GLM

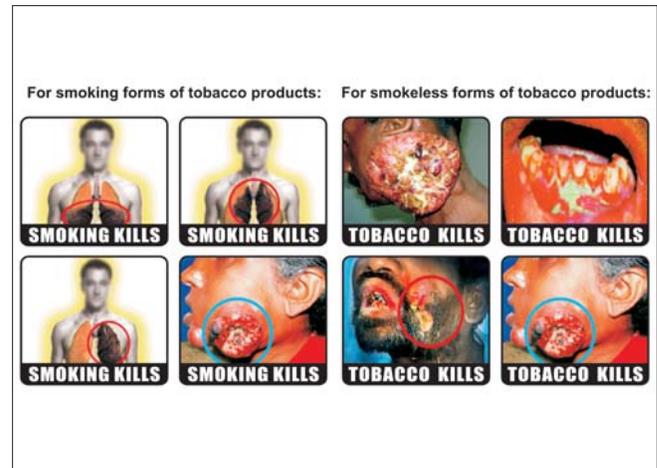


Figure 1b: Pictorial health warnings that are to be displayed on all tobacco product packs in India from December 1, 2011

procedure. We applied multiple linear regression models to test the differences in perceptions about effectiveness of pictorial health warnings between predictor variables which included (1) tobacco users and nonusers; (2) literates and illiterates; and (3) males and females, after adjusting for tobacco use category, age, education, and gender. A covariate was not considered for adjustment when the results were segregated by that covariate. All the tests were considered significant at 5% level of significance.

The questions on perceptions about effectiveness consisted of three options for participants to respond: “yes,” “no,” and “don’t know.” The responses to “no” and “don’t know” were combined during statistical analysis. Responses were aided by showing three pictorial warnings on all tobacco products in India [Figure 1a].

The participants in this study were in the age range of 10–50 years and included 1066 males and 831 females. Among participants, 20% were illiterates, 29% had obtained education only up to school level, 28% were graduates, 20% were postgraduates, and 3% were advanced degree holders. Fifty-four percent of the respondents were tobacco users. Among male respondents, 60% were tobacco users, and among female respondents 46% were tobacco users.

Table 1 shows that overall, 64.47% of participants expressed that the current health warnings are inadequate to convey health impact of tobacco, and over half of participants felt that these warnings would neither motivate tobacco users to quit nor prevent nonusers from initiating. It was expressed by 61.47% of the

Table 1: Perceptions on effectiveness of pictorial health warnings (n = 1897)

Sociodemographics	Perceptions*				
	Will not prevent future tobacco use	Does not inform about the adverse effect	Will not motivate tobacco users to quit	Will not prevent nonusers from initiating	Inadequate to convey health impacts
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Overall	43.82 (41.55, 46.08)	40.14 (37.90, 42.38)	52.92 (50.65, 55.19)	51.25 (48.99, 53.52)	64.47 (62.29, 66.64)
Education [†]					
Illiterate (n = 382)	50.14 (44.86, 55.42)	46.08 (40.81, 51.35)	61.17 (55.87, 66.47)	56.20 (50.90, 61.49)	67.98 (62.90, 73.60)
Literate (n = 1513)	41.30 (38.74, 43.86)	38.14 (35.60, 40.69)	51.01 (48.42, 53.61)	49.60 (47.02, 52.19)	63.57 (61.07, 66.08)
<i>P</i> -value [†]	0.0032	0.0094	0.0010	0.0321	0.1357
Tobacco user category					
Users (n = 1023)	58.41 (54.53, 62.29)	51.17 (47.27, 55.07)	61.47 (57.51, 65.43)	60.90 (56.91, 64.90)	71.50 (67.65, 75.36)
Nonusers (n = 874)	37.31 (33.47, 41.15)	35.37 (31.52, 39.22)	50.91 (47.03, 54.79)	46.99 (43.07, 50.90)	62.75 (58.97, 66.52)
<i>P</i> -value [†]	<0.001	<0.001	<0.001	<0.001	<0.001
Gender					
Male (n = 1066)	47.37 (43.67, 51.07)	41.79 (38.08, 45.51)	52.88 (49.11-56.65)	51.89 (48.08, 55.69)	64.95 (61.29, 68.62)
Female (n = 831)	48.35 (44.40, 52.30)	44.74 (40.77, 48.70)	59.50 (55.49, 63.52)	56.01 (51.96, 60.05)	69.30 (65.39, 73.20)
<i>P</i> -value [†]	0.6761	0.2126	0.0056	0.0872	0.0618

*Responses for “no” and “don’t know” were combined, [†]2 responses were missing for education category, [†]Multiple linear regression models were applied. Education, tobacco user category, gender, and age (when the variable was not segregated) were adjusted

tobacco users, 61.17% of illiterates, and 59.50% of females that the warnings will not motivate tobacco users to quit when compared with 50.91% of nonusers, 51.01% of literates, and 52.88% of males, respectively ($P < 0.01$ for all). More tobacco users when compared with nonusers reported that the current health warnings are inadequate to convey the health impact of tobacco use (71.50% vs. 62.75%; $P < 0.001$). Across educational and gender categories, majority of the participants were of the opinion that the current health warnings are inadequate to convey the health impact of tobacco use (67.98% of illiterates vs. 63.57% of literates; 64.95% of males vs. 69.30% of females), although these differences were not significant.

Among users, 55% of illiterates when compared with 45% of literates expressed that they will not be more concerned about the health effects of tobacco products while using them, after seeing these new warning labels ($P < 0.001$) (data not shown).

Findings of this study corroborate with those of an earlier study conducted in Mumbai, which suggest that pictorial warnings that existed on tobacco packs from May 31, 2009, to December 1, 2011, are perceived to be ineffective by the Indian population.⁹ Our study extends the findings of this previous study by assessing perceptions among people of five Indian states. The studied pictorial health warnings on tobacco products are not fulfilling their intent to warn people about the hazards of tobacco use and do not provide motivation to quit

tobacco or prevent its initiation. It has been experienced in other countries that strong pictorial health warnings on tobacco packs effectively inform people about adverse health effects of tobacco.² It is also known that lack of adequate knowledge about health consequences of tobacco use can lead to initiation and continuation of tobacco use.¹⁰ Continued use of ineffective warnings represents a missed opportunity as the Government has failed to effectively utilize this evidence-based strategy to enhance knowledge about the effects of tobacco among the people, in addition to other educational interventions, e.g., anti-tobacco advertising employed by the Ministry of Health and Family Welfare in India.

It can be inferred that about 54% of the respondents who were tobacco users would continue to use tobacco and would not contemplate quitting even after observing the warnings. On the other hand, it is quite likely that about 46% of the nonusers might initiate tobacco use in future despite seeing the warnings, as these warnings do not deter or inform them sufficiently. Tobacco industry pressure has prevailed and has deterred implementation of stronger and meaningful warnings.

India’s multicultural and multilingual settings as well as high illiteracy levels warrant that the pictorial component of the warnings is robust enough to effectively convey health messages to people from varied backgrounds. The literates in India would be able to read the written part of the warnings “Smoking Kills” and “Tobacco Kills” and still benefit from this information. However, poor

and illiterate tobacco users who will not make any sense of these pictures and at the same time cannot read the written warnings are likely to continue using tobacco despite having observed the warning labels. Similarly, nontobacco using illiterates might initiate tobacco use out of ignorance about the adverse effects of tobacco. This has the potential to lead to increasing health problems among the poor and illiterate population.

Limitations: This study was undertaken only in five states of North and North-East India where four Advocacy Forum for Tobacco Control (AFTC) partners (organizations) agreed to work on this project in response to a call for collaboration from the parent organization. Inclusion of greater number of states as well as rural population, representative of all zones in India and a random sample, would have given better results and increased generalizability.

The prevalence of tobacco use reported in our study was not representative of the national prevalence, especially for females due to use of quota sampling technique.

Findings of this study provide important lessons for India as well as other developing countries, to ensure effective and field-tested pictorial health warnings are displayed on tobacco product packages and not to let Governments succumb to tobacco industry pressures which can result in milder and ineffective health warnings. It is important for international tobacco control community and World Health Organization to consider that parties to FCTC should report effectiveness of pictorial health warnings too while reporting country's progress on Article 11 and the assessment of WHO MPOWER implementation should include an indicator for demonstrating effectiveness of pictorial health warnings for the member nations.

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