

A Perception and Effect of Health Warning Labels (Hwls) Under COTPA on Smokeless Tobacco Users and Non-Users'rural Part of a District of Gujarat

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ABSTRACT

Background: Health warning labels on tobacco product packaging are a cost-effective way to disseminate information to the public on the dangers of tobacco and benefits of quitting. It is one of the key components of a comprehensive, integrated approach to tobacco control. "W" in MPOWER denotes "Warn about the dangers of tobacco." Hence study was undertaken to determine perception and effect of health warning labels (HWLs) Cigarettes and Other Tobacco Products Act i.e., COTPA on smokeless tobacco users and non-users in rural area. **Methods:** An observational cross-sectional study done where users and non-users of smokeless tobacco were interviewed by house-to-house survey from 3-4 randomly selected villages of selected one out of three primary health centre (PHCs) for Rural health training of Medical College.

Results: 286 users and 310 non-users of smokeless tobacco(SLT) were interviewed.80.42% users and 59.68% non-users noticed HWLs.46.09% of users felt nothing by seeing HWLs.42.17% of users and 70.81% non-users advised their near ones not to use SLT by seeing health warning label.4.45% non-users reported that they did not use the SLT after seeing the HWL.5 users were tried to quit/reduce use of SLT by seeing health warning labels.

Conclusion: Purpose of HWLs were to make people more concern about risks of using smokeless tobacco and also preventing non-user from initiating use. They are effective if large pictures with texts and emotional

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appeals are used. Though HWLs didn't have expected effect on current users but they advised close ones for not using smokeless tobacco after seeing it.

Keywords: Smokeless tobacco; Health warning labels; Pictorial; Toll free number

INTRODUCTION

Tobacco use is one of the leading preventable causes of death globally. [1] After independence, India is the second largest consumer and the third largest producer of tobacco products. Global Adult Tobacco Survey (GATS-2) India 2016-17 revealed that 28.6% of all adults are using tobacco currently. But it is also killing 6 million people every year. [1,2]

Smokeless form is much more prevalent than smoking form. Smokeless tobacco users have a risk of dying earlier than non-user. It contributes to different illnesses. Despite knowledge of all its ill effects and health hazards, people continue to use it. [1]

Hence, the strategy MPOWER has been initiated by WHO Framework Convention on Tobacco Control (FCTC) for control of tobacco. It assists country-level implementation of effective interventions to reduce demand of tobacco. ^[3] Government of India enacted legislation Cigarettes and other Tobacco products (Prohibition of advertisement and regulation of Trade and commerce, Production, Supply and distribution) Act, (COTPA) 2003 as per guidelines of FCTC to address growing menace of tobacco use in the country. ^[4]

Article 11 of the WHO FCTC and its guidelines enacted effective health warnings on all tobacco product packaging. Health warning labels comprise part of the "W" in MPOWER—Warn about the dangers of tobacco. [5] According to section 7 of COTPA there should be pictorial health warning label on each tobacco product saying that 'Tobacco causes cancer' with toll free helpline number to help in quitting tobacco use.

Health warning labels on tobacco product packaging are a cost-effective way to disseminate information to the public on the dangers of tobacco and benefits of quitting. These messages appear most widely and consistently on manufactured cigarette packs. Other types of tobacco products, such as cigars or smokeless tobacco, may have different warnings and regulations. Well-designed health warnings and messages on tobacco product packages have been shown to be effective in reducing tobacco consumption. Effective health warnings, messages and other tobacco product packaging and labelling measures are key components of a comprehensive, integrated approach to tobacco control. [6]

Hence, the study was undertaken to determine perception and effect of health warning labels (HWLs) under COTPA on smokeless tobacco users and non-users in rural part of district of Gujarat. The objectives were to know socio-demographic aspects of smokeless tobacco users and non-users and the effect of health warning labels on smokeless tobacco users along with this to understand the perception of health warning labels among users and nonusers and to create an awareness regarding toll free helpline and to motivate users for quitting.

MATERIALS AND METHODS

The observational cross-sectional study was conducted in the Rural area of district of Gujarat which comprises 9 talukas and 1 municipal corporation. District is having 40 PHCs of which Department of community medicine of Medical College has 3 primary health centres (PHC) for Rural health training for students. One



PHC was selected randomly to conduct the study, from which, list of villages was obtained from which 3-4 villages were selected randomly. Smokeless tobacco users and non-users of adults aged 15-65 years from the selected villages were interviewed by house-to-house survey using pretested and preformed questionnaire which was prepared to assess socio-demographic variables, determinants of smokeless tobacco use, past history of smokeless tobacco use, perception and effects of health warning label on smokeless tobacco. Study was carried out from June-2019-June-2020.

According to GATS2 report conducted in 2016-17, Prevalence of smokeless tobacco use in Rural Gujarat is 22%. Hence, with allowable error of 15% sample size is calculated using formula:

$$n = \frac{(Z\alpha)^2 pq}{L^2} = 605$$

$$p = 22\%$$
, $q = (100 - p) = 78\%$, $L = 15\%$ of $p = 15\%$ of (22)

Required sample size could not be achieved because of ongoing pandemic situation.286 users and 310 non-users of smokeless tobacco were interviewed.

The analysis of the data was done using Microsoft office excel 2007. Data was cleaned, coded and analysed. Descriptive statistics were used to summarize frequencies, percentage and measure of central tendency for demographic variables. Statistical significance for all comparisons was based on the Z-test and chi square test. The study was approved by the Institutional Ethical Review Board.

RESULTS

Total 286 users and 310 non-users of smokeless tobacco were interviewed.

35.66% users and 31.87% non-users were belonging to age group of 25-34. Majority of users were males and non-users were females. Majority of the users(53.17%) and non-users(59.68%) were educated up to secondary level. More than 90% of them were Hindu by religion in both the groups. Majority of users(54.90%) belong to joint family as compared to non-users(48.71%). 66.78% of the users and 52.58% non-users belong to class III and below the difference was found to be statistically significant.(Table 1) Major occupation of users was service (31.74%) followed by labourer (22.73%). Since majority of the non-users were females, 58.39% of them were housewives.

88.81% of users were consuming tobacco daily. Pan masala (61.19%) followed by Gutkha (34.96%) was the most common product consumed. (Figure 1)

Nearly 60.48% of the users were using smokeless tobacco for more than 5 years with median duration of use was 10.75 years.67.48% of users initiated using smokeless tobacco at the age between 15 to 24 years with median age of initiation was 19 years. Nearly 50% of users were consuming 2-3 packs per day. Median expenditure for purchasing smokeless tobacco was Rs.15/- per day. Reasons for initiation of smokeless tobacco use were identified as peer pressure 186 (65%) was the most common reason followed by curiosity 78 (27.27%). (Figure 2)

80.42% users and 59.68% non-users noticed health warning labels. Noticing of health warning label was found statistically significant among users. (Table 2) 46.09% of users felt nothing while 50.27% of non-users feeling disgusting by seeing health warning labels. (Figure 3)

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Nearly 95% of users and non-users understood the health warning label. Major understanding about health warning label was "it causes cancer" mentioned by 94.09% of users and 97.72% of non-users. (Table 2)

Out of 286 users, 41(14.34%) were tried to quit or reduce use of smokeless tobacco some or the other time. (Table 3) Main reasons for trying to quit or reduce were self-realisation (29.2%) followed by health effects (26.83%). 5 (12.20%) users were tried to quit/reduce use of smokeless tobacco by seeing health warning labels. (Table2)

42.17% of users and 70.81% non-users advised their near ones not to use smokeless tobacco by seeing health warning label. Giving advice to someone after seeing it was found statistically significant among non-users. (Table 2) 58.76% users and 77.10% non-users gave advice for not using smokeless tobacco mainly because of its bad effect on health. (Figure 4)

9.44% of users and 1.94% of non-users noticed toll free number on health warning label. 6 (22.22%) out of who noticed toll free helpline number felt to call it but none had called. Noticing toll free helpline number were found statistically significant among users. Out of who noticed toll free helpline number, 50% had no idea about why that number was given.6 (22.22%) of the users knew that it's a quit helpline. (Table3)

212 (74.13%) of the users and 193 (62.26%) of non-users perceived that the health warning label was to 'make people more concerned about health risks of using smokeless tobacco.' (Table 3) 4.45% non-users reported that they did not use the SLT after seeing the HWL on the smokeless tobacco pack. (Table 3)

Table 1: Socio-demographic profile of users and non-users of smokeless tobacco

	Users	0/	Non-	Users	0/	T-4-1	0/	
	(n=286)	%	(n= 310)		%	Total	%	
Age (in years)								
15-24	48	16.78	74		23.87	122	20.47	
25-34	102	35.66	99		31.87	201	33.72	
35-44	67	23.43	66		21.29	133	22.32	
45-54	34	11.89	38		12.26	72	12.08	
55-65	35	12.24	33		10.65	68	11.41	
Mean age	36.2	7 <u>+</u> 12.50)		34.94 <u>+</u> 12.81			
	Chi square= 4.9159, P value 0.296041							
GENDER								
Female	65	22.73	21	15	69.35	280	46.98	
Male	221	77.27	95		30.65	316	53.02	
	Chi square= 129.841, P value <0.00001*							
EDUCATION	EDUCATION							
Illiterate	43	15.03	4	0	12.9	83	13.93	
Primary	23	8.04	16		5.16	39	6.54	
Secondary	152	53.15	185		59.68	337	56.54	
Higher secondary	45	15.73	45		14.52	90	15.1	
Graduate	23	8.04	2	3	7.42	46	7.72	



Post graduate	0	0	1	0.32	1	0.17		
	Chi square= 3.877, P value 0.42291							
RELIGION								
Hindu	278	97.2	303	97.74	581	97.48		
Islamic	8	2.8	7	2.26	15	2.52		
TYPE OF FAMILY								
Joint	157	54.9	151	48.71	308	51.68		
Nuclear	129	45.1	159	51.29	288	48.32		
SES								
Ι	20	6.99	37	11.94	57	9.56		
II	75	26.22	110	35.48	185	31.04		
III	78	27.27	88	28.39	166	27.85		
IV	89	31.12	55	17.74	144	24.16		
V	24	8.39	20	6.45	44	7.38		
	Chi square= 19.751, P value 0.000559*							

^{(*}Statistically significant P< 0.05)

Table 2: Regarding different observations among users and non-users

Observation and Understanding of Health warning label (HWL) on pack of smokeless tobacco							
	Users	0/	Non-Users	0/	Z test	D 1	
Noticed	(n=286)	%	(N=310)	- %		P value	
Yes	230	80.42	185	59.68	5.60	۰0 005*	
No	56	19.58	125	40.32	5.69	<0.005*	
Understanding							
Yes	220	95.65	176	95.14	0.25	0.8	
No	10	4.35	9	4.86	0.25		
Tried to quit or reduce use of smokeless tobacco among users (n=286)							
Yes	41	14.34	-	-	-	-	
No	245	85.66	-	-	-	-	
Advised anyone for not using smokeless tobacco							
Yes	97	42.17	131	70.81		<0.00001*	
No	133	57.83	54	29.19	5.83		
Total	230	100	185	100			
Toll free helpline on Health warning label on pack of smokeless tobacco							
Yes	27	9.44	6	1.94	4	-0.00001*	
No	259	90.56	304	98.07		<0.00001*	

^{(*}Statistically significant P< 0.05)



 Table 3: Reasons for different factors observed

Trying to quit or reduce use				
Reasons	Users (N=4)	- %	Non- users	%
Health effects	11	26.83	-	-
Religious	5	12.2	-	-
Insight	12	29.27	-	-
Health warning	5	12.2	-	-
Family pressure	6	14.63	-	-
Financial	2	4.88	-	-
Total	41	100	-	-
Toll free number on pack				
For complain	2	7.41	0	0
For information	1	3.7	1	16.67
Helpline	4	14.81	0	0
No idea	14	51.85	3	50
To quit	6	22.22	1	16.67
Company no.	0	0	1	16.67
Precepted for health warning labels on smokeless tobacco packs by u responses)	sers and no	n-users	(*multip	le
Don't know	8	2.8	51	16.45
Other	12	4.2	9	2.9
Make smokeless tobacco user want to quit	41	14.34	82	26.45
Help prevent young people from starting to use smokeless tobacco	73	25.52	41	13.23
Make people more concerned about health risks of using smokeless tobacco.	212	74.13	193	62.26
Not starting use of smokeless tobacco in non-users				
Don't like	-	-	148	50.68
Health effects	-	-	22	7.53
Not good	-	-	94	32.19
Health warning label	-	-	13	4.45
Insight	-	-	15	5.14



Figure 1: Type of smokeless tobacco used (*multiple responses) (n=286 users)

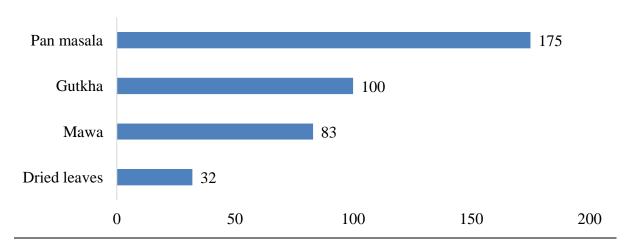


Figure 2: Reasons for initiation of smokeless tobacco (*multiple responses) (n=286)

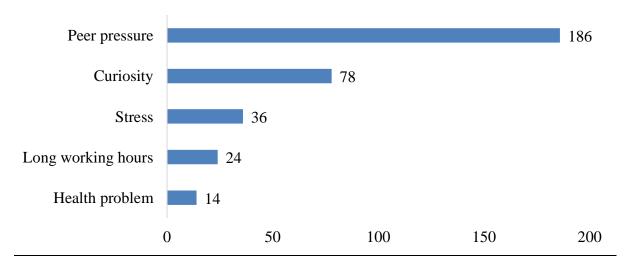




Figure 3: Feeling after seeing health warning label (*multiple responses)

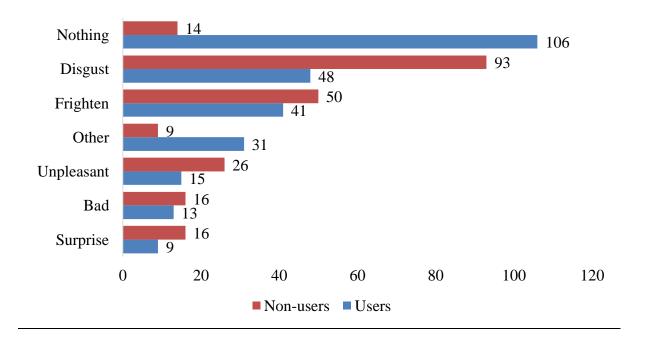
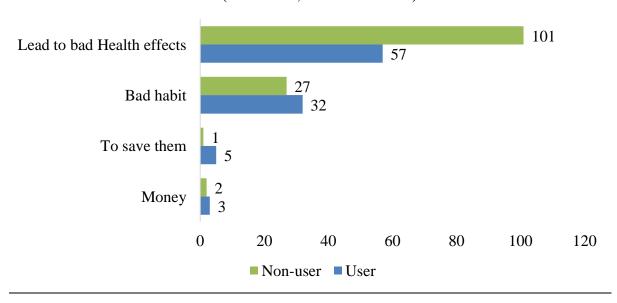


Figure 4: Reasons for advise anyone for not using smokeless tobacco (users n=97, non-users n=131)



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DISCUSSION

It has been 11 years since Health Warning labels were mandated on Tobacco packs and there has been very limited research in the different parts of the country that throw light on perceptions and effects of these labels in users and non-users of smokeless tobacco especially in rural area. This study tried to find out the same in rural Gujarat with the objectives to analyse sociodemographic aspects, understanding of labels and factors influencing effects of the labels.

In the present study, 77% of users were males while 23% users were females which was similar to GATS 2 done in 2016-17, according to which smokeless tobacco use in India was 21.4% (199.4 million) which had more male users than female. ^[2] In all states/UTs, prevalence of tobacco use in any form is much lower in women than men. ^[2] While in Gujarat also prevalence of smokeless use among males was higher than in females. ^[9]This is similar to various other studies which observed that tobacco consumption was significantly higher among males than females. ^[10-14]There may be lower self-reported use of tobacco among females because of social stigma which may also have influenced their response same as observed in National survey of tobacco prevalence. ^[15,16] Nearly one third of users in the present study, were in the age group of 25-34 years. In the similar study by Payal Kahar, 40% of the participants were of age group 18-34 years with mean age of 39.78 ± 15.23 years. ^[10] It was observed that majority of users were working either in government or private sector followed by daily wagers, whereas similar study by Payal Kahar observed that majority of users were self-employed or unemployed and agricultural workers. ^[10]

Education and occupation are important predictors of tobacco use. Various surveys carried out worldwide and in India reported greater prevalence of tobacco use among less educated and illiterate. However, in the present study, more than 50% of users were educated up to secondary level and majority of them were belonging to socio-economic class IV. [10,17,18]

The risks of tobacco use are highest among those who start early and continue its use for a long period. ^[18] In the current study mean age of initiation was found to be raised from 18.6 years as per GATS 2of Gujarat done in 2016-17, to 21.23± 8.07 years. ^[2] Though majority of users were started using smokeless tobacco in age of 15-24 years. This difference could be attributed to effectiveness of health warning labels and implementation of COTPA to some extent.

Pan masala followed by Gutkha was found to be most commonly used form of smokeless tobacco by majority of users. Though the Gutkha was most commonly used form of smokeless tobacco in Gujarat as per GATS 2.

[9] The ban on tobacco probably the reason for switching the type of tobacco.

As per data from GATS 2 all adults who use smokeless tobacco, 85% of them use it every day, and the remaining 15% use it occasionally. [9] Similarly, in the current study, it was observed that majority of them were daily (88%) users and only 12% were using it occasionally.

Peer pressure (65%) and curiosity (27%) was most common reason for starting use of smokeless tobacco. Similar findings were observed in various studies which noted that friends, siblings, parents, personality symbol, movies were the motives towards starting of tobacco use. [19,20] According to other study, reasons for using tobacco were to decrease fatigue, mental tension or to relax, because of living away from family.²¹



The present study observed that, majority of users were noticed health warning labels on pack of smokeless tobacco (80%). This finding is slightly higher than reported by GATS 2 where 72% of them noticed HWL. ^[2]Otherstudies found that around 60% and 66% of the users in rural areas were aware of health warning labels. ^[22,23]The users of tobacco products have higher chances of coming across health warning labels and attempt to reduce/quit use.

In the present study, though majority of users understood and perceived health warning labels correctly, nearly 80-85% of them didn't feel like to quit or reduce the tobacco use. Very few of the users tried to quit / reduce use of smokeless tobacco. Reasons for quitting/reducing the use were variable from health issues to religious purpose but some of them did this after seeing health warning labels. The study also noticed that, 5.8% of past users had stopped use completely. Only one past user had quit smokeless tobacco use by seeing health warning labels on the pack.

Furthermore, data from GATS revealed that the warning labels depicting oral cancer have motivated 275 million current users to quit. ^[25]Results of the GATS 2 showed that around 27% of adult current smokeless tobacco users in rural Gujarat and 46.2% current smokeless tobacco users in India thought of quitting tobacco after seeing a warning label. ^[9] A study conducted in rural Puducherry found that only 7 out of 155 current users of tobacco reported a decrease in the frequency of tobacco use after seeing the health warning label. ^[22] As in study area people have a low educational level and belong to lower socio-economic class, there are chances of lesser effect on quit attempts

Though health warning labels didn't have expected effect on current users, nearly 50% of them advised close relatives and friends for not using smokeless tobacco after seeing health warning label.

Nonusers of tobacco products usually come across health warning labels on packets of tobacco products lying at home/roadsides, in shops and in advertisements. In the current study half of non-users felt disgusting after seeing health warning labels. More than two third of non-users advised someone near to them for not using smokeless tobacco after seeing it. Few of the non-users didn't start using smokeless tobacco after seeing health warning labels. Hence, it is important to understand the awareness and perception regarding health warning labels among nonusers of tobacco products, as they act as motivators to decrease/quit use of tobacco.

Very few of the users noticed toll free helpline number on health warning labels. Out of them only 4 were aware that it is helpline number for quitting tobacco use. None of the users called / tried to call this helpline ever. This could be mainly due to lack of awareness.

Regarding the opinion of participants about the purpose of displaying health warning labels on the packets, one fourth of users and less than 15% non-users reported that it is to create an awareness among young people and prevent them initiating the use. Very few had corrected knowledge regarding purpose of HWL.

Hence, the pictorial warning labels will be more effective benefit if it is more noticeable, readable, believable and clear. [25] The Text messages should be in local language and warning labels should be part of a larger public health promotion effort. Evoking fear appears effective in generating the motivation to quit, especially if accompanied by information on where to obtain cessation assistance, such as quit line or cessation website.

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CONCLUSION AND RECOMMENDATION

As study observed low effect of HWLs among users in spite of observing and understanding it. Hence, there is need for strict monitoring of HWL on the packets by the authority.

- Since majority of users understood the HWL that it causes cancer, there is need to notify multiple health warning messages regarding various diseases caused due to smokeless tobacco use other than cancer along with economical loss the person facing.
- As there is no significant effect of warning labels is observed, there should be comprehensive information and communication, campaign, including through mass media, in line with the notified health warnings for greater impact of the warnings
- Pan masala is most commonly used form of tobacco which is sold many times in loose form. Hence, smokeless tobacco should be sold in packaged form along with clearly printed HWL on the packages.
- Toll free number should be prominently displayed as it is observed by very few users because of smaller font size and also there is a need for creating an awareness regarding the purpose of toll-free helpline.
- Effective tobacco cessation services should be accessible, affordable and available for the tobacco users as an easy recourse to complement and to ensure sustainable long-term impact of any strong tobacco control measure.
- There should be periodical monitoring of the status and impact of implemented health warnings on various smokeless tobacco products among their populations.
- Innovative strategic planning and introduction of new technology like mobile application can be introduced for spreading awareness. Past users who quit tobacco use can participate in the awareness campaigns and enforced to sensitize others against tobacco use.

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