

Original article

The impact of pictorial warning attached on cigarette packet to the attitude of smoking habit.

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Abstract:

This was a cross sectional descriptive study conducted to assess the effect pictorial warning message on cigarette packets to the attitude and practice of smokers using a semi-structured questionnaire employing purposive sampling technique with a sample size of 214 by face to face interview carried out in different cities, towns, and villages of Bangladesh from August 2016 to February 2017. Almost 97.6% were male and Most of the respondents (40.9%) belonged to the 20-29 years age group. Majority (58.3%) of them were educated from secondary to graduate few percent below primary. Highest 22.9% respondents were students followed by 17.6% private job holder, 16.9% day labor and only 1.4% was jobless. About 40.2% started smoking by the influence of friends, 26.2% started on curiosity and 20% due to depression and majority 41.0% smoked 1-5 cigarette sticks per day. More than half (65.5%) of respondents felt relax to refreshing by smoking and about two third 77.6% continued their smoking due to habitual act or psychological pleasure Almost 93.4% gave attention to the pictorial warning on the cigarette packets. About 46.4% thought pictorial warning in cigarette packets alarms for not to smoke and only 23.8% thought smoking will cause cancer; 21.4% thought smoking is injurious to health. After seeing the pictorial warning on cigarettes 57.6% reduced the smoking number of sticks per day also attempted to quit smoking. To reduce this restricting the advertisement of tobacco, arranging campaign to raise awareness among people about the health and environmental hazards of smoking and increase the tax on tobacco.

Key words: Impact, Pictorial, Cigarette, Attitude, Smoking, Habit.

Introduction:

Tobacco use has predominantly negative effects on human health and concern about health effects of tobacco have long history. Tobacco smoke contains more than 70 chemicals, that cause cancer.¹ When tobacco smoked, nicotine causes physical and psychological dependency. Cigarette sold in underdeveloped countries tends to have higher tar content, and are less likely to be filtered, potentially increasing vulnerability to tobacco smoking related disease.²

Tobacco use is the single greatest cause of preventable death globally.³ The world health organization (WHO) estimates that each year tobacco causes about six million deaths (about 10% of all deaths).^{1,4} The United States centers for disease control and prevention describes tobacco use as “The single most important preventable risk to human health in developed countries and an important cause of premature death worldwide.”⁵

Tobacco use leads most commonly to diseases affecting the heart, liver and lungs. Smoking is major risk factor for heart attacks, strokes, chronic obstructive pulmonary

disease (COPD) including emphysema and chronic bronchitis, and several cancers particularly lung cancer, cancers of the larynx, and mouth, bladder cancer, and pancreatic cancer. It also causes peripheral vascular diseases and high blood pressure. These effects depend on the number of years that a person smokes and on how much the person smokes. Environmental tobacco smoke, or secondhand smoke, has been shown to cause adverse health effects in people of all age.⁶

Tobacco use is a significant factor in miscarriages among the pregnant smokers, and it contribute to a number of other health problems of the fetus such as premature birth, low birth weight, and the chance of sudden infant death syndrome (SIDS) increases by 1.4 to 3 times.⁷ Incidence of erectile dysfunction is approximately 85% higher in male smokers compared to non-smokers.^{8,9}

From the 1890s onwards, associations of tobacco use with cancers and vascular diseases were regularly reported; a met-analysis citing 167 other workers was published in 1930, and concluded that tobacco use caused cancer.¹¹ Follow up prospective cohort studies in the early 1950s clearly found that smokers died faster, and

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were more likely to die of lung cancer and cardiovascular disease.¹⁰

Several countries have taken measures to control the consumption of tobacco with usage and sales restrictions as well as text warning and pictorial warning messages printed on packaging. Additionally, smoke-free laws that ban smoking in public places such as workplaces, theaters, and bars and restaurants reduce exposure to secondhand smoke and help some people who smoke to quit, without negative economic effects on restaurants and bars.¹ Tobacco taxes that increase the price are also effective, especially in developing countries.¹²

Materials and methods:

A cross sectional descriptive study carried out in different cities, towns, and villages of Bangladesh conducted from August 2016 to February 2017 to assess the effect of adding pictorial warning message on cigarette packets to the attitude and practice of smokers. Data were collected by using a pretested structured questionnaire and cigarette packets of different brand as research tool from self-motivated 580 male and female smoker with non-probability purposive sampling method. After collection, data were checked to exclude any error or inconsistency. All ethical issues, which were related to research involved with human subjects, were followed according to the guideline of ethical review-committee. Data were analyzed manually and by using computer. and expressed in frequency and percentage.

Results:

Out 580 respondents (566, 97.6%) were male and (14, 2.4%) were female. In this study young adults (20-29 years' age) respondents were 40.9%, middle aged (30-39 years) were 28.8% and 40-49 years' group were 15.9%. Among the respondent 58.3% were educated from secondary to graduate. 20.2% were up to primary level and rest was below primary.

Highest 22.9% respondents were students followed by 17.6% private job holder, 16.9% day labor and only 1.4% was jobless (Table 1). About 40.2 percent started smoking by the influence of friends, 26.2% started on curiosity and 20% due to depression. Among the respondents 41.0% smoked 1-5 cigarette sticks per day, 30.5% 6-10 sticks and 16.9% smoked 11-15 sticks per day.

Majority 65.5% respondents felt relax to refreshing by smoking. 20.3% felt very healthy after smoking. It has been found that 77.6% continued their smoking due to habitual act or psychological pleasure and only 19.7% thought smoking relief their stress so, continue their smoking (Table 2). Almost 93.4% gave attention to the pictorial warning on the cigarette packets. (Figure

I) About 46.4% respondents thought pictorial warning in cigarette packets is the warning alarm for not to smoke. 23.8% thought smoking will cause cancer and 21.4% thought smoking is injurious to health (Figure II). After seeing the pictorial warning on cigarettes 57.6% respondents reduced the smoking number of sticks per day also attempted to quit smoking (Figure III).

Table-1: Demographic characteristics of respondents (n=580)

Sex	Frequency (n)	Percentage (%)
Male	566	97.6%
Female	14	2.4%
Age		
20-29 yrs.	277	47.7%
30-39 yrs.	167	28.8%
40-49 yrs.	92	15.9%
Above 50 yrs.	44	7.6%
Education		
Secondary to Graduate	339	58.48%
Primary to below Secondary	118	20.34%
Below Primary	113	19.48%
Occupation		
Student	133	22.9%
Service holder	165	28.5%
Businessman	123	21.2%
Day Labor	98	16.9%
Rickshaw Puller	43	7.4%
Jobless	18	3.1%
Total	580	100

Table 2: Characteristics of smoking (n=580)

Characteristics of smoking	Frequency	Percentage
Reason for starting smoking		
By the influence of friends and cousins	312	53.80%
On curiosity	152	26.20%
Depression	116	20.00%
Number of cigarette stick smoked per day		
1-5	287	49.48%
6-10	195	33.62%
More than 10	98	16.90%
Reason for continuation of smoking		
Habitual act or psychological pleasure	450	77.58%
Relief stress	114	19.66%
Others	16	2.76%
Total	580	100

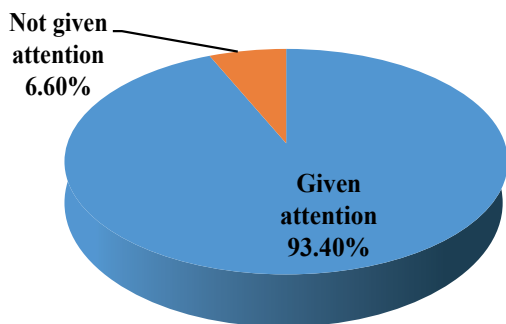


Figure 1: Respondent’s attention to the warning pictures in the cigarette packet (n=580)

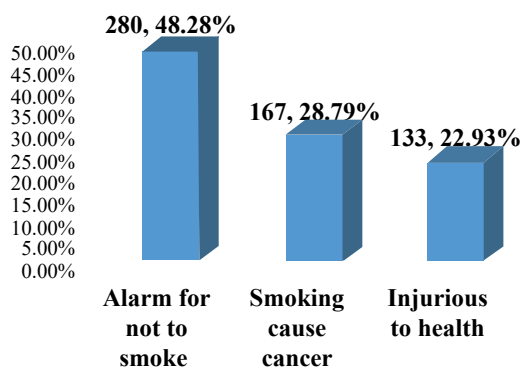
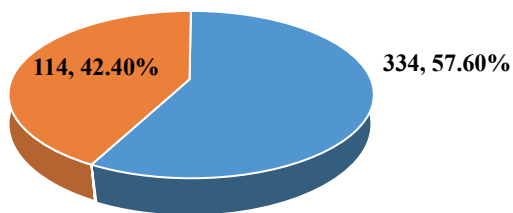


Figure 2: Distribution of respondents according to their thinking after seeing the warning picture



- Reduction of smoking number of sticks per day with intention to quite smoking
- Do not care suck pictorial warning

Figure 3: Impact of pictorial warning on cigarette packets to the smoking habit (n=580)

Discussion:

The study was carried out to find out the impact of adding warning pictures on cigarette packets to the attitude if smoking among the smokers of Bangladesh. The present study was a cross-sectional study which was carried out in various places of Bangladesh. Data was collected from 580 respondents among which 566 were male (97.6%)

and 14 were female (2.4%). Worldwide male smokers are more than female. In 2015, 16.7% of adult males and 13.6% of adult females smoked cigarette.¹³ Such difference may validate to a combination of physiological (particularly ovarian hormones), cultural and behavioral factors.¹⁴

As long time smokers are already suffering from smoking related diseases so, venerable young adult respondents were selected more than older respondents. In this study young adults (20-29 years age) respondents were 40.9%, middle aged (30-39 years) were 28.8% and 40-49 years group were 15.9%. Among the respondent 58.3% were educated from secondary to graduate. 20.2% were up to primary level and rest was below primary. Educated people are more cautious about health. So, higher educated respondents were selected more than the less educated people to see the impact of pictorial warning on cigarette to the attitude of smoking habit. Highest 22.9% respondents were students followed by 17.6% private job holder, 16.9% day labor and only 1.4% was jobless. 40.2 percent started smoking by the influence of friends, 26.2% started on curiosity and 20% due to depression. This result correlates with the findings of Emma et al.⁽¹⁵⁾ Among the respondents 41.0% smoked 1-5 cigarette sticks per day, 30.5% 6-10 sticks and 16.9% smoked 11-15 sticks per day. 65.5% respondents felt relax to refreshing by smoking. 20.3% felt very healthy after smoking. It has been found that 77.6% continued their smoking due to habitual act or psychological pleasure and only 19.7% thought smoking relief their stress so, continue their smoking. These findings are correlated with findings of Md. Shakeel A et al.¹⁶ They found that 76.4% respondents agreed that they continued their smoking habit for psychological pleasure. Among the respondents 93.4% gave attention to the pictorial warning on the cigarette packets. Same response was found by Seth M Noar et al.¹⁷ They found that pictorial warning attracted and held attention better and garnered stronger cognitive and emotional reaction. 46.4% respondents thought pictorial warning in cigarette packets is the warning alarm for not to smoke. 23.8% thought smoking will cause cancer and 21.4% thought smoking is injurious to health. After seeing the pictorial warning on cigarettes 57.6% respondents reduced the smoking number of sticks per day also attempted to quit smoking. A nine months’ cross-sectional descriptive study by Heydari GR et al.¹⁸ found that pictorial warning on cigarette packets causes 7.6% reduction of cigarette consumption. Brewer NT et al.⁽¹⁹⁾ and Noar SM et al.^{20,21} found that pictorial warning on cigarette packets increases the intention to quit, reduces consumptions of cigarettes and successfully quitting smoking and not to start smoking.

Conclusion:

Smoking being a dangerous practice but one of the leading causes of preventable health sufferings and death globally.

References: -

1. "Tobacco Fact Sheet N0 339" May 2014. Retrieved 13 May 2015.
2. Nichter M, Cartwright E. Saving the children for the tobacco industry. *Medical Anthropology Quarterly*. 5(3):236-56, 1991.
3. World Health Organization (2008). WHO report on the Global Tobacco Epidemic 2008: The MPOWER package (PDF). Geneva: World Health Organization. P.8.ISBN 978-92-4-159628-2.
4. "Top ten causes of death". Retrieved. 13 May, 2015.
5. "Nicotine: A powerful addiction Archived 2009-05-01 at the way back Mecine". Centers for disease control and prevention.
6. Vainio H. Is passive smoking increasing cancer risk?. *Scandinavian Journal of work, environment and health*. 13(3):193-6,1987.
7. "The health consequences of involuntary exposure to tobacco smoke: A report of the surgeon General. Atlanta, U.S., Page 93: U.S. Department of health and human services, Centers for disease control and prevention, national center for chronic disease prevention and health promotion, Office on smoking and health. 2006. Retrieved 2009-02-15.
8. Peate I. The effects of smoking on reproductive health of men. *British Journal of Nursing*. 14(7): 362-6, 2005.
9. Korenman SG. Epidemiology of erectile dysfunction. *Endocrine*. 23(2-3):87-91.2004
10. Doll R. Uncovering the effects of smoking: historical perspective., *Statistical Methods in Medical Research*. 7(2): 87-117, 1998.
11. Proctor RN Commentary: Schairer and Schoniger's forgotten tobacco epidemiology and the Nazi quest for racial purity. *International Journal of Epidemiology*. 30(1): 31-4, 2001.
12. Higgins ST, KurtiAN, Redner R, et al. A literature review on Prevalence of gender differences and intersections with other vulnerabilities to tobacco use in United States,2004-2014. *Prev Med.* ; 80: 89-100., 2015
13. Current cigarette smoking among adults-United States. 2005-2015., *MMWR Morb Mortal Wkly Rep*. 65(44); 1205-1211., 2016.
14. Sieminska A, Jassem E., The many faces of tobacco use among women., *Med Svi Monit Int ed J exp Clin Res.*, 153-162., 2014.
15. Emma C and Harriet de W., Effects of acute psychological stress on cigarett craving and smoking., *Nicotine Tob Res*. 12(4): 449-453., 2010.
16. Md. Shakeel A, Madipally KS, P Parthasarathy R et al., Reasons for smoking among the teenagers of age. 14-17 years in Vikarabad town; A cross sectional study. *14(1)*; 80-83, 2016.
17. Seth MN, Marissa GH, Diane BF et al., Pictorial cigarette pack warnings: a meta-analysis of experimental studies., *Tobacco control*. 25: 341-354, 2016.
18. Heydari GR, Ramezankhani A. Tanaffos., and Talischi F., The impacts of cigarette packaging pictorial warning labels on smokers in the city of Tehran. *Tanaffos.*, 10(1): 40-7, 2011.
19. Noar SM, Francis DB, Bridges C et al., The impact of strengthening cigarette packets warning: systemic review of longitudinal observational study. *Soe SCi Med.*, 164: 118-29, 2016.
20. Brewer NT, Hall MG, and Noar SM., Effect of pictorial cigarette pack warnings in smoking behavior., *A randomized Clinical Trial.*, *JAMA intern Med.*,176(7): 905-12, 2016.
21. Noar SM, Hall MG, Francis DB et al., Pictorial cigarette pack warnings: a meta-analysis of experimental studies., *Tob Control.*, 25(3): 341-54, 2016.