

Analyzing the effect of Anti- tobacco campaigning on Health Cost among North Western University Students, Khulna, Bangladesh

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Abstract

Smoking is being considered as recent trend in youngster which is increasing day by day. In recent times, teenager smoking rate is growing alarming high because teenager considers it as their relaxation and enjoyment purposes. When an adult student consumes cigarettes, it threatens major health disaster as well as mental disaster in university students. In this paper, the author considers health cost as dependent variables when author sets some independent variables. In recent times youngster is being affected by heart-diseases, skin diseases etc. The author runs multiple regression which represents the impact of independent variables on dependent variables monthly. In this paper, it indicates that Age and educational status have negative connectivity on health cost but employment status has positive connection with health cost in NWU students. In addition, cigarettes price and anti-smoking campaigning has negative connectivity with health cost in NWU students. The policy makers in Bangladesh should launch anti-smoking polices to reduce health cost within university students.

Keywords: *Smoking, Youngster, Anti-smoking Campaigning, Hearth diseases, Skin Diseases*

1. Introduction

Smoking is one of the major concerning issues in this modern era. A huge proportion of young people were addicted with smoking or other tobacco products. As a result, people were often suffering from various diseases such as cancer, lung damage, heart diseases, fertility problems and various problems. The Smoking and Tobacco Products Usage (Control) Rule, 2015 has also ensured that tobacco packets without graphical health warning (GHW) cannot be marketed or sold after 19 March 2016; if found otherwise, is a punishable crime by law. If a person violates the provisions of this rule, it is made punishable with an exact sentence for a term not exceeding six months or a financial penalty which may extend up to BDT 200,000 (Approximately USD 2,700) or both. Besides, if the person violates the provisions more than once, every time the amount of fine or punishment shall be doubled. In addition to specified health warning requirements, all imported and locally manufactured tobacco packs must be labeled for sale in Bangladesh only. Placement of GHW continues to be a contentious issue in Bangladesh. While health researchers and tobacco control experts advocate for GHW placement at the top of tobacco packets, tobacco manufacturers have successfully lobbied for them to remain on the lower half, arguing that tax stamps and band roll were attached to the top flap, which would require new technology and thereby create difficulty for implementation.

Specific to pictorial cigarette package warning labels, research has shown that smokers perceive these warning labels to be effective in increasing motivations to quit (Hammond, Fong, McDonald, Brown, & Cameron, 2004; Willemsen, 2005). In sum, evidence suggests the utility of anti-tobacco messages and antismoking campaigns. The WHO has identified pictorial health warnings on product packaging as the most cost-effective policy interventions to communicate the health risks of tobacco use. Health warnings on tobacco packages were an excellent medium for communicating health information given their reach and frequency of exposure, and were unique among tobacco control

policies in that they were delivered at the time of use and at the point of sale. The global burden of tobacco use is bear by LMICs, including Bangladesh. WHO (2008) mentioned that negative impact of tobacco creates overtime, affecting negatively on brains and lungs, turns into lung-cancer. A recent report of WHO (2020) indicates that smoking is also the major cause of cancers of the mouth, throat, oesophagus, pharynx, larynx (voice box), tongue, lips and salivary glands that can turn into severe health-crisis. Smokers feel heart-attack risk at 2-4 times more than non-smokers. Moreover, smoking leads to diseases blood vessels and most of the limbs have died due to severe blood pressure.

2. Statement of the Problem

Most of the young people thinks smoking is a part of fashion and it reduce their tension, mental stress. They know the impacts of smoking but they casually ignore these warnings as smoking doesn't affect overnight. It takes a long term which is compared with slow poisoning. This study bears rationality as there is a little research in Bangladesh related to this topic. This study explores the effectiveness of health warnings labeled in cigarette packages. The research can help other researchers and policy maker to implement new policies expecting true effectiveness of antismoking advertisements on cigarette packages. The study has more findings about why the smokers don't care about these warnings and their perception about antismoking advertisements and smoking, which findings will help to explore objectives.

3. Objectives

- A. To assess the impact of anti-tobacco advertisements on health cost in NWU Students
- B. To assess respondent's approach in NWU Students

4. Research Questions

- A. How much do antismoking advertisements effect on health cost in NWU Students?
- B. What were their thoughts & perceptions of anti-smoking advertisements in NWU Students?

5. Literature Review

Wilke, Turner, & Giuliano (2003) result showed that different ethnic background will perceive the anti-smoking messages differently. They explained that the different gender of audiences may also influence the response towards the advertisement. This is due to male and female audiences taking the messages differently. Furthermore, male and female audiences may have different attitudes towards an advertisement. Smith and Stutts (2006) conducted a study to evaluate the influence of individual factors on the effectiveness of message content in anti-smoking advertisement aimed at adolescents. The study showed that both message contents namely health and cosmetics content were influenced by three individual factors which were grade level, gender and ethnicity. Peters, Kelder, Prokhorov, Amos, Yacoubian, Agurcia & Shegog (2005) explored the relationship between perceived youth of different race exposure to anti-smoking advertisement. The study found that there is no difference between race and anti- smoking media. In Asia, generally tobacco use differs significant difference the genders. Fisher, Richards and Krugman (1989) found that small text warnings were hooked up with low level of awareness to the warnings. Several researches about the efficacy of the graphical warnings suggested that comparing to the textual warnings; the pictorial warnings have more effect. Shanahan and Elliott (2009) suggested that grater is the size of the ad; the grater is its impact. Hence, the bigger is the ad, much more effective it is. The Australian research

examined local cigarette packs where 90 percent of the front side and 30% of the backside were covered with graphical warnings and found that the effectiveness of warning depends on the size of the advertisement. Fathelrahman, Omar, Awang, Borland, Fong, Hammond, & Zain (2009) suggested, the size is also crucial in text warnings based on that large warning text is increasing the perceptions of risk and the message is more informable when it is bigger and easier to read. Pictorial warnings also increase the perceptions of the warning credibility. Evans, Peters, Strasser, Emery, Sheerin, & Romer (2015) stated, health warnings with pictures attract much more attention than the textual warnings since it is the first thing that the smoker is looking at, that supplying him more information. The pictorial warnings were better remembered than the textual warnings and therefore the health information is remembered better for a long term period. Researches in countries where the pictorial warnings have been implemented showed that the smokers can identify more smoking risks than in the countries with textual warnings. Fong, Hammond, Jiang, Li, Quah, Driezen & ITC China Project Team (2010) For example, a research on Chinese smokers in 2008 showed that the smokers rated the pictorial warnings as a much more effective tool than the textual warnings for motivating smoking cessation and for preventing smoking in general. Hammond (2011) also claimed that; in a later research, “health warnings with pictures were rated by smokers and non-smokers as more effective than text only warnings”. The pictorial warnings help to understand the message and therefore have a greater impact than the regular textual warnings.

Gospodinov & Irvine (2004) investigated the effects of the pictorial warnings in Canada three years after its implementation; found that the graphical warnings were helping in reducing the daily consumption of cigarettes. Evans et al, (2015) suggested that “the presence of graphic images (compared to text- only) caused more negative affect toward smoking, a process that indirectly influenced risk perceptions and quit intentions”. Moreover, they found in their research that text elaborated messages, reducing the reliability of the warning while the graphical warnings increased the knowledge about the smoking risks. The graphical warnings will be remembered better than textual warnings when the pictorial warning will contain more detailed information than is available in short textual warning. Here, it can be suggested that by having more detailed information, the pictorial warning becoming to be more “scary” than the textual warnings. That's to say, that amount of information in the picture, increasing or decreasing the level of the fear that the threat causing. Slovic, Finucane, Peters, & MacGregor (2002) said emotions can influence behavior directly and to motivate the target audience for the required changes. Besides the mentioned above, both, the pictorial and the textual warnings motivate people to use cessation services. However, the appearance of a helpline on the packages is increasing the calls for these centers. But the appearance of the graphical warnings is highlighting the health-risk information and promoting greater processing and acceptance of the information comparing to the textual warnings. White, Webster & Wakefield (2008), Australian research found that the youth who were exposed to the graphical warnings were more aware to the risks and attended to look for more information to the results of the smoking. Metha (2000) the target audiences who had a positive feeling toward advertising will be seemed to recall more compared those who had a negative feeling. As such, the new anti-smoking advertising messages should able to create a positive feeling among the youth audiences. Comparative advertising is advertising that focuses on messages with direct or indirect promotional comparison. The advertiser can use side-by-side comparison between smoking and non-smoking. For smokers, the advertiser can show the negative consequences of smoking. Meanwhile, for non-smokers, the advertiser can show the benefits of non-smoking. According to Global Adult Tobacco Survey (GATS) 2009 4.13 crore of young people were smoker and 4.30 crore were affected by indirect smoking. World Health Organization (2004) says that 57000 people died per annum on the other hand 382000 people faced disability due to tobacco use and smoking. Bangladesh became a signatory

of WHO Framework Convention on Tobacco Control (FCTC) in 2004. FCTC says to increase tax on tobacco products and the collected tax should be spent to control tobacco use and health development. Sustainable Development Goals (SDGs) third goal Good Health and Well-being focuses on strengthening the implementation of the World Health Organization Framework Convention on Tobacco Control (FCTC) in all countries.

6. Research Methodology

North Western University is one of the leading private universities in Khulna, Bangladesh. It is situated in Khulna, North Western, and Bangladesh. NWU has already purchased 18 bighas of land nearby Rupsha Bridge. It has seven departments with modern facilities and accessories for students. The academic programs of North Western University started on 11 February, 2013 with 440 students in four departments. As of November 2015, the university has 7 departments, 2200 students, 75 teachers, 60 officers, North Western University. It is first private university in Khulna where student politics is not allowed. A map of the study area is given in the following. Primary data was collected through questionnaire survey of the undergraduate students of NWU by using Google Form in online to explore the effectiveness of graphic health warning based anti-tobacco advertisements among youth.

Table 1: Population of the Study

Year of Study	Business Administration Department (BBA)	English Department (ELL)	Computer Science Department (CSE)	Electrical and Electronics Department (EEE)	Total
1 st Year	45	43	38	45	171
2 nd Year	43	45	40	44	172
3 rd Year	47	43	39	45	174
4 th Year	39	46	38	47	170
Total	174	177	155	181	687

Office of the Disciplines, 2023

7. Variable Identification and Model Specification

The author selects multiple regression models to measure the impact of independent variables on monthly health cost of NWU students.

$$HC = \beta_0 + \beta_1 AG + \beta_2 MI + \beta_3 US + \beta_4 GN + \beta_5 RL + \beta_6 ES + \beta_7 MS + \beta_8 EPS + \beta_9 LS + \beta_{10} RXL + \beta_{11} CP + \beta_{12} ASC + u$$

Table 2: Dependent and Independent Variables that affecting in Model

Dependent Variable: Health Cost in BDT (Per Month)				
Variables	Definition	Data Collection	Expected Sign	Authors Reference
Health Cost (HC)	Health Cost (Per Month)	In BDT	-	Mehta, A. (2000).
Independent Variables:				
Variables	Definition	Data Collection	Expected Sign	Authors Reference
Age (AG)	Age of Students	In Numbers	+ or -	Basham, P., & Luik, J. C. (2012).
Monthly Income (MI)	Monthly Income of Students	IN BDT	+ or -	Shanahan, P., & Elliott, D. (2009).
University Semester (US)	Level of Semester	In Numbers	+ or -	De Meyrick, J. (2001).
Gender (GN)	Gender Status	If Male = 1, Female =0	+ or -	Wolburg, J. M. (2008).
Religion (RL)	Religious level of Students	If Islam = 1, Others = 0	+ or -	Shanahan, P., & Elliott, D. (2009).
Educational Status (ES)	Educational level of Students	School of Years	+	Basham, P., & Luik, J. C. (2012).
Marital Status (MS)	Marital Level of Students	If Married = 1, Not Married = 0	+ or -	Hammond, D. (2011).
Employment Status (EPS)	Employment Status of Students	If Employed = 1, Not Employed= 0	+ or -	Wolburg, J. M. (2001).
Living Status (LS)	Living Region of Students	If living with university Hall or alone = 1, Living with Family =0	+ or -	Basham, P., & Luik, J. C. (2012).
Relaxation Level (RXL)	Feelings and Relaxation level	Qualitative Method (1 to 5)	+ or -	Shanahan, P., & Elliott, D. (2009).
Cigarette Price (CP)	Cigarette Price level	In BDT	-	De Meyrick, J. (2001).
Anti-smoking Campaigning (ASC)	Anti-smoking Campaigning by online or offline	If Online Campaigning =1, If offline =0	+ or -	Mehta, A. (2000).

Source: Author's Compilation based on Field Survey, 2024

8. Multiple Regression and Result Analysis

The author collects primary data where the author measures the impact of independent variables on dependent variables. In this research, the author considers dependent variable as (Health cost per month in BDT) and set of independent variables. In this paper, the dependent variable is general number so the author considers multiple regression models.

Table 3: Estimation of Anti-smoking Campaign on Health Cost

Variables Name	Variable Sign	Coefficient	Standard Error	z value	Pr(> z)
<i>Age</i>	<i>AG</i>	-0.005029	0.001001	-2.175	0.050 *
<i>Monthly Income</i>	<i>MI</i>	0.000223	0.000789	-0.898	0.456
<i>University Semester</i>	<i>US</i>	0.00456	0.000689	-0.986	0.156
<i>Gender</i>	<i>GN</i>	0.00456	0.00896	-0.459	0.986
<i>Religion</i>	<i>RL</i>	0.00456	0.00456	-0.279	0.2023
<i>Educational Status</i>	<i>ES</i>	-0.005456	0.007001	2.175	0.0756 *
<i>Marital Status</i>	<i>MS</i>	0.000554	0.000277	-0.349	0.7485
<i>Employment Status</i>	<i>EPS</i>	0.005312	0.007001	2.043	0.0599 *
<i>Living Status</i>	<i>LS</i>	0.0756	0.008985	0.896	0.786
<i>Relaxation Level</i>	<i>RXL</i>	0.000698	0.000364	-0.987	0.7894
<i>Cigarette Price</i>	<i>CP</i>	-0.656456	0.45689	-4.898	0.0009 ***
<i>Anti-smoking Campaigning</i>	<i>ASC</i>	-1.089566	0.18968	-8.756	0.0009 ***
Observations					125
Constant					715.125
R ²					0.675
Adjusted R ²					0.698
F Statistic					80.57
Dependent Variable:					Health Cost in BDT (Per Month)
NB.: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1					

Source: Author Own Compilation, 2024

In this table, it is observed that Age, living status, educational status, cigarette price and anti-smoking campaign have negative connection with health cost per month. Firstly, if the age increases by 1 year, it will decrease health cost significantly, it is statistically significant at 10 percent level. Secondly, if a student achieves more class educations that help him to increase the knowledge level about non-smoking campaigning. It will decrease health cost significantly. It is statistically significant at 10 percent level.

Thirdly, if a person is employed, it will help to increase health cost significantly. It is statistically significant at 10 percent level. Fourthly, if cigarette prices increase continuously, it will decrease health cost significantly. It is statistically significant at 1 percent level.

If online anti-smoking campaign goes and shows actively, it will decrease health cost significantly. It is statistically significant at 1 percent level. In recent times, university students Pass lots of time on social media, so online marketing creates a lot of impact to consume fewer Cigarettes. Except these variables, no variables create any significant impact on cigarette consumption per day. When the governmental bodies increase cigarette price, it indirectly discourages People are to consume fewer cigarettes. It is statistically significant at 1 percent level.

9. Conclusion

Antismoking advertisements create awareness among the respondents about danger of smoking. Sometime GHWs or pictorial warnings can't transmit the message clearly the study says. Many people have lessened frequency of taking cigarettes seeing the antismoking advertisements. Some of the smokers believe that smoking gives them pleasure, reduce tension and mental stress. A large proportion of nonsmokers believe that these antismoking advertisements on cigarettes packages help

them to refrain from smoking and tobacco use. Considering all these perspectives, can argue that higher the antismoking advertisements; greater the chance to reduce smoking behavior. As all the consequences of opting such a hazardous habit is known to the youths, there is a greater chance that they will consider the message seriously and will finally root it out of their lives.

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