

The influence of advertising messages on the smoking habits of teenagers

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SUMMARY.

Smoking is a significant cause of deaths that could be prevented. Active and passive smoking both contribute to the development of chronic diseases and increased mortality. The early initiation of smoking habits and constant exposure to tobacco products increase the relative risk factor in the occurrence of serious acute or chronic health disorders. In addition to the negative health effects, smoking has a discernible economic impact on the smokers themselves and on the health system of the country and detrimental effects on the social aspects of the population. The mass media and the internet appear to have an important role in increasing the smoking habits of the population. Encouragement of individuals to smoke is accomplished through advertisements which exculpate the negative smoking effects, displaying pictures of health, psycho-emotional balance and feelings of independence and social acceptance. It appears that the recipients of this kind of message are mainly adolescents, who are more susceptible to be influenced towards developing smoking habits, in the absence of anti-smoking advertisements and messages. The effects of smoking in adolescence and the influence of the mass media on the development of smoking habits constitute a multiactorial problem with immediate and long-term socio-economic effects. The coordinated efforts of public and private organizations, with the support of health professionals, could contribute greatly to increasing the awareness of the dangers and to combatting the problem. *Pneumon 2011, 24(2):188-193.*

INTRODUCTION

For many years smoking has been the subject of research, studies and observations on the part of the scientific community. Currently, study outcomes confirm that smoking is a potential risk factor for health, causing increased morbidity and mortality that could be prevented.¹⁻⁴

The negative effects of smoking influence not only smokers but eve-

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ryone who comes in touch with tobacco and its final products, including the group of people called passive or environmental smokers.

The effects of smoking on health are related to the occurrence of both acute and chronic disorders. Smoking can affect almost all the systems in the body, and in many cases the disorders are irreversible. A multiplicity of studies have shown the complications of smoking during pregnancy, the the serious health problems and anomalies incurred by the infant.^{2,5-7}

According to the World Health Organization (WHO) more than 4 million deaths recorded annually worldwide are related to smoking habits.⁸

It is estimated that in 2020, tobacco-related mortality will reach 10 million annually. In the USA is estimated that annually about 400,000 individuals die because of smoking and about 50,000 adolescents die of disorders related to exposure to tobacco products. It is estimated that about 6 million adolescent smokers will die in the future and 8.6 million will develop disorders caused by primary or secondary exposure to tobacco products.¹⁰

The mass media, the press and internet carry much of the responsibility. It is apparent that the direct and indirect advertisement of tobacco and the exculpation of addiction are the main focus of the commercial and advertising departments of the tobacco industry.

This multifactorial problem unites health professionals, socio-economic organizations and all those involved (e.g., anti-smoking organizations, education, family), in the configuration of a common strategy and policies for the limitation of the problem and subsequent improvement in the health of the population.

THE EPIDEMIOLOGICAL AND ECONOMIC APPROACH TO THE PROBLEM

Smoking is associated with a number of diseases and disorders in the human. The exposure of children and adolescents in any way to tobacco products can cause a variety of diseases and could influence their psychosocial development.

According to the Centers for Disease Control and Prevention (C.D.C), in the USA^{1,2} 19.5% of senior high school students (19.8% males and 19.1% females) are regular smokers. Daily almost 4,000 teenagers try smoking, of whom 1,000 become regular smokers.

A 2004 study reported by Rudatsikira on 27,727 adolescents found that 15.9% of the males and 15.3% of the females were regular smokers. Those adolescents who

were living with a close family member who was a regular smoker had a probability of becoming regular smokers themselves double that of those living in an anti-smoking environment: OR=2.73, CI:95% (2.21-3.04). Those in close relationships with regular smokers develop a positive attitude towards smoking; the probability rate for those having one friend who was a smoker was OR=2.27, CI:95% (1.91-2.71) and for those with 2 smoker friends was OR =2.71, CI:95% (2.21-3.33).¹⁰

According to a similar WHO study in 2008, conducted in 140 countries on the effects and risk factors of smoking, adolescents were regular smokers at a rate of 9.5%. The highest rate (19.2%) was recorded in the European countries and the lowest in the East Mediterranean countries (4.9%). Rates of higher than 30% were recorded in countries such as Bulgaria, Chile, Colombia, the Czech Republic, and Latvia. A significant statistical difference was found between the smoking rates of male and female adolescents in countries in Africa, the East Mediterranean, South East Asia and the West Pacific, but not in Europe and America. Intent to develop smoking habits in the next year was indicated by 19.1% of the sample.¹¹

In the 2009 review of Baska⁸ comparing the outcomes of a global study by WHO regarding adolescent smoking habits, it appeared that 22% of male and 17.8% of female adolescents were regular smokers. For male adolescents the highest rate was recorded in Georgia and the lowest in Montenegro, and in females the highest was in Bulgaria and the lowest in Armenia. About 4 in 10 male adolescents (37%) and 2 in 10 female adolescents had tried smoking before the age of 10 years. Among the non-smokers, 29.9% of the male and 35.8% of the female adolescents stated that they may smoke within the next year. Almost 8 in 10 (78.7%) schoolchildren are exposed to environmental smoking at home and 61.6% had at least one parent who was a smoker. In addition, 87.3% reported that they had been exposed to environmental smoking in public areas during the previous week.⁸

In Greece, in 2007, a study conducted by the National School of Public Health and the University of Thessaly showed that of 6,378 participating adolescents, 32.1% of the sample reported that they had tried smoking in the past, while 16.2% were regular smokers). One in 4 reported that they had tried smoking before the age of 10 years. About 1 in 5 non-smokers said that they probably will smoke within the next year, and 94.1% had been exposed to tobacco products in their domestic environment. Finally, 95% stated that they could buy tobacco products without restrictions.¹²

In 2008 a study conducted by Arvanitidou in 15 senior high schools in Thessaloniki showed that the rate of smokers was higher in females (40.9%) than in males (34.5%). According to this study, the males started smoking at an earlier age compared to the females (12.7 years compared to 12.9 years), while the rate of those smoking more than 20 cigarettes daily was 81.2% in the male and 75% in the female adolescents.^{13,14}

Of significance are the financial figures related to the use of tobacco and its products by adolescents. According to a study by Healthon, in 1997, adolescents consumed 890,000,000 packs of cigarette, at a cost of up to \$737,000,000. In 2002 this figure was reduced to 541,000,000 packs of cigarette, but the income increased to \$1.2 billion.¹⁵

Of great importance to interpretation of the role attributable to socio-economic restraints in the prevention of the problem of adolescent smoking is the outcome of the research by Decicca in 2008 in a study in the USA. According to the researchers, one of the causes of the reduced rate of adolescent smokers (from 36.5% to 22%) was the price rise of a pack of cigarettes by an average of \$2.¹⁶

THE CONTRIBUTION OF THE MEDIA TO SMOKING HABIT PROMOTION

It is a fact that adolescents spend a lot of their free time watching movies and TV and reading magazines. The exposure of adolescents to icons, or scenes with smoking-related items appears to have a positive influence on the development of smoking habits. Stockwell showed in 1997 that adolescents are influenced 3 times more strongly than adults towards developing smoking habits by their exposure to tobacco products in films and movies. In the USA a study showed that in a total of 20 best seller movies the watchers were exposed to smoking images at an average of 5 minutes per film, while antismoking messages were limited to 43 seconds per film. TV programmes also devote a small percentage to showing tobacco products or regular smokers.^{9,17,18}

A study by Dukan, in 1997, demonstrated the strong contribution in promoting smoking habits of song lyrics and musical video clips. In the world renowned musical channel, MTV, 26% of the broadcast musical video clips highlight smoking habits.¹⁷

Magazines addressed at adolescents also have a serious role in the formation of adolescents' character and in promoting idols. Magazines with fashion and life style

content promote smoking habits by illustrating models and VIPs who smoke.¹⁸

In recent years the rapid development of technology has induced great changes in the life style of adolescents. The ease of having a PC and internet access has created a different range of factors in the psycho-social development and education of children and adolescents. According to a study by Lenhart et al, conducted in 2006, 91% of children aged 12-17 years used internet services, of whom 61% used them on a daily base. The most popular reported sites were those of social networks, at a rate of 55%.¹⁹

In 2004, according to a research project published by C.D.C., 34% of junior high school and 39% of senior high school pupils reported that they were exposed to tobacco advertisement and had the opportunity to order cigarettes via internet.²⁰

In 2009 Jensen carried out a study recording exposure to tobacco via the internet, which showed that of the 1.2 million sites that were visited by the 346 participants, 8,702 (0.72%) had items regarding smoking, of which 4612 (53%) were social network sites. The smoking items on these sites were mainly in the form of reports or text, while 3% was in the form of images.²³

THE INFLUENCE OF ADVERTISEMENTS ON ADOLESCENT SMOKING HABITS

Advertisements inundate our society, via the mass media such as TV, radio, movies, outdoor signs, newspapers, magazines, posters, etc. It is calculated that the average American citizen watches 2.5 hours of TV programmes daily, while adolescents listen to music or radio for almost the same number of hours.⁹ Internet has acquired for adolescents greater accessibility to a wide range of data. Whatever kind of entertainment or information adolescents choose, it is almost certain that they will be exposed to a variety of advertisements, many of which are related to smoking or anti-smoking activities.²¹

The tobacco industry has great experience in promoting its products. A test of the immediacy of advertisements is their acceptance by the target group at which they are addressed. An example that had general acceptance was the promotion in the market of "Light" cigarettes, with less tar and nicotine, giving the illusion of safety and clean smoking.⁸

During previous decades, just as in our days, tobacco products have a prominent place among advertisements of consumer products. The advertised tobacco products, together with clothing, footwear and equipment for

outdoor activities appear to have a positive acceptance by adolescents.

The goal of tobacco advertisements is to inform the audience about their products, and at the same time present an attractive image, inducing admiration, curiosity, and humour, mainly among younger individuals. The commercial departments of the tobacco industry use the following tactics:

a) encouragement of younger people to experiment with cigarettes, b) promotion of daily (regular) smoking, c) discouragement of smokers from quitting their smoking habits, and d) encouragement of ex-smokers to restart smoking. The advertising efforts are adjusted according to the target group they are addressed at, the cultural background and the age and socio-economic status.^{8,16}

The promotion of extreme models and the feelings of independence or maturity that are usually highlighted in tobacco advertisements apparently have an immediate influence on adolescents' life style.

A study by Pucci and Siegel in 1991 showed that adolescents who had items with a tobacco logo developed smoking habits; a high rate of them purchased cigarettes of the same brand.²²

According to a study by Pollay, conducted in 2001, the advertisement of a tobacco product increases its commercial value and its sales traffic 3 times more effectively to adolescents than to adults.²³

A study by William, conducted in 2002, showed that advertising campaigns of the tobacco industry influence the smoking habits of adolescents, inducing them towards smoking, while conversely anti-smoking messages appear to have no influence. According to this study the advertisements using images had influence in initiation smoking.²⁴

A 2009 study by Tibor Baska showed that about 2 in 10 students (18.2%), in 25 European countries, reported possessing an advertising object with a logo of a tobacco company, and 10.9% had been offered and had accepted free cigarettes by a company. According this study Latvia had the highest rate (32.2%) in Europe of adolescents possessing an item with a logo of tobacco product, and Turkey had the lowest rate (10.1%). Free cigarettes were offered to adolescents at a rate of higher than 20% in Poland, Serbia and Montenegro.⁸

In Greece in the same year a pilot study by Vardava showed that 30% of a sample of 95 young people aged 12-19 years had been offered free cigarettes by a tobacco company, as advertising and promotion of its products.²⁵

USEFULNESS AND DEGREE OF INFLUENCE OF ANTI-SMOKING ADVERTISEMENTS ON INITIATION OF SMOKING

As an effort to control and restrict the smoking habits of the population, the government of the USA in 1990 started the broadcast of TV commercials with anti-smoking content and style. Up until 2002 more than 35 countries have participated in such efforts, with major information campaigns and financial resources from the state budgets and money from special tobacco charges.^{15,28}

The main framework of these messages has been the encouragement of smokers to quit smoking and the discouragement of adults and adolescents from developing smoking habits.

Almost 10 years after the first anti-smoking efforts, Sherry Emery²⁸ attempted to investigate the acceptance by adolescents of anti-smoking advertisements. They showed that an average exposure to at least 1 anti-smoking advertisement during the preceding 4 months assisted in comprehending the negative effects of smoking: OR= 1.25, CI:95% (1.11-1.42), and reduced the intention of smoking in the future: OR= 1.43, CI:95% (1.17-1.74) and the probability of becoming a regular smoker in the future: OR= 0.74 CI:95% [0.63-0.88].

Anti-smoking advertisements could contribute positively to a decrease in adolescent smoking habits. According to Pechmann,²⁹ advertisements which highlight the negative effects of smoking while showing the social dimensions of the problem are considered more effective.

Other scientists report that better results are achieved by promoting advertisements with an emotional appeal to the effects of passive smoking. The use of live images of the negative effects of smoking appears to have a positive influence in achieving the goal of reducing smoking in adolescence.

A comparative study by Wakefield³⁰ was conducted in 2003 in 3 countries (the USA, Australia and Britain) to monitor the influence of anti-smoking advertisements, projecting 50 commercial spots. No significant difference was found relating adolescent smoking habits to the promotion of anti-smoking messages. According to scientists a joint effort by the 3 countries with simultaneous promotion of specific messages could achieve positive results. Ensuring the necessary financial resources and outlining a common policy could bring significant results in the reduction of adolescent smoking habits, especially in countries with common sociocultural characteristics.

During the period 2000-2003 Shah³¹ carried out a

study on the influence of anti-smoking advertisements and adolescent smoking habits. The results suggest that the anti-smoking campaigns have a protective influence regarding the initiation of smoking. The probability ratio for a student to become regular smoker was significantly lower if he was exposed to anti-smoking advertisements the last 30 days: OR= 0.89, CI95% (10.81-0.98) for males, and OR=0.79, CI95% (0.69-0.90) for females.

The exposure to trademarks of cigarettes during sports events and TV programmes increases considerably the probability of smoking: OR=1.37 (CI:95% [1.26-1.48]) for males and OR=1.19 CI:95% (1.07-0.33) for females.

The probability ratio for smokers compared to non-smokers regarding the acceptance of free cigarettes offered by a supplier or a tobacco industry was OR=2.62 CI:95% (2.37-2.89).

CONCLUSIONS-PROPOSALS

The high rate and the increased influence of smoking in adolescence is recorded in every research project and study. It is obvious from both the bibliography and practical experience that commercials play an important role in the promotion of smoking behaviour. The initiation of smoking is often related to the influence and immediacy of advertisements. The promotion of anti-smoking advertisements, with the simultaneous restriction of advertising of tobacco products, could contribute decisively to restraining the problem.

Health professionals on their part, with joint efforts in health educational projects, could promote anti-smoking messages and anti-smoking advertisements addressed at both adolescents and adults.

The state should maintain a strict legal framework that could protect adolescents from smoking behaviour and from the promotion of smoking advertising, at the same time encourage the introduction of anti-smoking programmes.

The continuing scientific research on smoking and its effects on adolescents assists significantly in the evaluation and possible redesign and implementation of smoking prevention programmes. Overcoming the current problems caused by the smoking habit, and especially discouraging the smoking of tomorrow's citizens, as illustrated by the efforts of other researchers and by ourselves, is very difficult but not impossible. Concerted efforts must be made by the relevant stakeholders to harness the results of all the investigations.

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