Original Article

Tobacco Brand Names and Logos Recognition by 1st Grade Schoolchildren

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Abstract

Background & Aims: Prosmoking messages, delivered through smoking parents, media and other exposure factors, can reach very young children and influence attitudes and behaviors toward smoking. This study aimed to assess the ability of 1st grade of primary schoolchildren to recognize tobacco products and logos of widely advertised tobacco products compared with other common commercial products.

Methods: Cross-sectional survey in class room settings using a questionnaire designed to measure 3 popular tobacco products and logos for 3 common commercial products (1 food, 1 beverage and 1 restaurant brand) were conducted in primary schools at different regions nationwide The students were instructed individually under supervision of researcher and their teachers about each logo with one of 6 products pictured on an A4 colored paper and the answers were recorded.

Results: The sample consisted of 1,369 students, of whom 47.5% were girls. In general, overall tobacco recognition rate was much lower than other products reaching 53%, which was statistically significant (p=0.0001). Boys showed a higher recognition rate to cigarette brands than girls that was statistically significant (p=0.002).

Conclusions: The majority of first grade school children are familiar with tobacco brands. This study's findings suggest that children are widely exposed to tobacco products and promotion. More effective regulations are needed to combat a generation of nicotine addicts.

Keywords: Tobacco; Children; Cigarette; Brand recognition; Saudi Arabia

الملخص

الرسائل المزيفة للتدخين والتي يمكن ان تنتقل من خلال الآباء والامهات او وسائل الاعلام او أي وسيلة أخرى قادرة على الوصول للأطفال والتأثير على سلوكياتهم واخلاقياتهم تجاه التدخين. الهدف من هذه الدراسة هو تقييم مقدرة طلاب وطالبات الصف الأول الابتدائي على التعرف على منتجات التبغ المعلن عنها على نطاق واسع مقارنة بالمنتجات الشائعة الأخرى.

المنهج: تم إجراء مسح مقطعي باستخدام استبيان مصمم لقياس ثلاثة من منتجات التبغ المعروفة وثلاثة منتجات أخرى منتشرة بين الأطفال (١غذاء، ١ مشروب، ١ مطعم).الدراسة أجريت في المدارس الابتدائية لطلاب وطالبات الصف الأول الابتدائي في مناطق مختلفة على مستوى المملكة. وكان الاطفال يقومون بالإجابة على الاستبيان تحت اشراف وتعليمات الباحث والمدرسين والمدرسات. كان الاستبيان يحمل ستة صور ملونة لثلاثة علامات تجارية من منتجات التبغ وثلاثة علامات تجارية لمنتجات أخرى شائعة وتم تسجيل الإجابات.

النتائج: كان عدد الاطفال١٣٩٦ طالباً، منهم ٤٧.٥٪ من الفتيات. وبصفة عامة، كان المعدل العام لمعرفة منتجات التبغ للفتيات اقل من الفتيان الي اظهروا نسبة تعرف وصلت إلى ٥٣٪ وكانت هذه النسبة مثبتة احصائياً. أيضا الفتيان اظهروا نسبة تعرف عالية لمنتجات التدخين وكانت النتيجة مثبتة احصائياً ايضاً.

الاستنتاجات: غالبية أطفال الصف الأول ابتدائي على دراية ومعرفة بمنتجات التبغ. وتشير نتائج هذه الدراسة إلى أن الأطفال معرضون على نطاق واسع لمنتجات التبغ والترويج له. وهناك حاجة إلى لوائح أكثر فعالية لمكافحة جيل من مدمني النيكوتين.

Introduction

Smoking is a noteworthy general well-being issue. It is considered the biggest preventable reason for death in the industrialized world [1]. In spite of the fact that there is a wellbeing cautioning on every bundle of cigarettes demonstrating that smoking is the fundamental driver of lung disease, lung cancer and heart diseases, and disregarding the opposition to smoking centers circulated everywhere throughout the Kingdom, and smoking in Saudi Arabia is expanding quickly, especially among the adolescent, somewhat because of forceful advertising methods by tobacco organizations [2].

In the last two decades, adolescents have become more exposed to tobacco advertising at early ages [3]. Many risk factors have been embroiled in the prediction of adolescent to be smokers. These factors include smoking of parents [4], friends smoking [5], family social problem [6], and tobacco advertising [7]. In Saudi Arabia, smoking is prevalent at different age groups, and the prevalence of current smoking is much higher in males than in females [8].

The advertising of smoking can increase the prevalence of smoking, especially with young children. In the past, twenty-three years ago, a small study had a massive effect on the way tobacco is marketed in the United States [9]. Fischer et al., found that 6-year-old young boys and girls perceived with likewise high rates logos of the Disney Channel's Mickey Mouse and Camel Cigarettes' Old Joe Camel [10]. Camel is one of the three most well-known cigarette brands among youth smokers, with 15.1 percent inclining toward Camel, as indicated by the 2011 National Survey on Drug Use and Health. This and similar studies uncovered complex and powerful advertising practices that were unmistakably arriving at youngest children. The level of recognition in children is high, and when they believe in something even if it's useful or harmful it will represent in their behavior at the future.

Prosmoking messages, delivered through smoking parents, media which has become more influential element currently and other exposure factors, can reach very young children and influence their attitudes and behaviors toward smoking [9, 10, 11]. Given, the association between exposure to tobacco marketing and usage of tobacco products, this study aimed to assess the ability of 1st grade primary schoolchildren to recognize tobacco products and logos of widely advertised tobacco products compared with other common commercial products.

Methods

Study Population

Multi stage sampling method was conducted between January 2016 and April of 2017, we surveyed 1,369 first grade schoolchildren among whom 718 (52.5%) were boys and 651 (47.5%) were girls. All the students were in first grade. We randomly collected the responses from governmental primary schools in different regions nationwide. The surveyed population consisted of all students

whom attended the class at the time of the survey. The study was approved by the Research Ethics Committee at Prince Sultan Military College of Health Sciences (study reference IRB-2017-02-02).

Study design and setting

An anonymous survey was distributed in a class room setting using a questionnaire designed to measure 3 popular tobacco products and logos for 3 common commercial products (1 food, 1 beverage, and 1 restaurant brand) were conducted in primary schools at different regions nationwide. The questionnaire incorporated different questions related to knowledge of different kinds and logos of the smoking brands and food. The students were instructed individually under supervision of researcher and their teachers about each logo with one of 6 products pictured on an A4 colored paper and the answers were recorded, Fig.1.



Figure 1. Brands and logos were shown to schoolchildren.

Statistical analysis

Data were analyzed using GraphPad Prism 7 software (GraphPad Software Inc., La Jolla, CA, USA). Descriptive statistics (absolute values and proportions) were used to analyze responses to the survey. Chi-square tests were conducted as appropriate.

A P value <0.05 was considered statistically significant.

Results

The sample consisted of 1,369 students, of whom 47.5% were girls. The mean age of the surveyed students was 6.8 ±0.56years. In general, overall tobacco recognition rate was much lower than other products reaching 53%, which was statistically significant (p=0.0001). Boys showed a higher recognition rate to cigarette brands than girls that was statistically significant (p=0.002), Table 1.

Table 1. Gender wise recognition rate for brand and logo

	Boys			Girls	
	n	%		N	%
Tobacco Products					
Cigarettes (Marlboro; L&M)	485	*67.2%		270	*41.4%
Hookah	302	*42%		221	*33.9%
Foods					
McDonald's	561	78.1%		458	70.3%
Lay's chips	681	94.8%		632	97.1%
Pepsi	688	95.8%		643	98.7%

* p<0.05. Chi-square test overall recognition rate was higher for tobacco products vs. foods (p=0.0001); Chi-square test showed a higher recognition rate between boys than girls (p=0.002).

Both boys and girls showed similar rate of recognition of logos for other commercial products. For example, 96% boys reported recognition of Pepsi logo while 99% of girls identified it. Similarly, 78% of boys identified McDonald's logo in comparison to 70% of girls.

Regarding Lay's Chips logo, about 95% of boys recognized the logo in comparison to 97% of girls, while 42% of boys recognized Hookah logo that was much lower in girls 34%.

Discussion

In this survey, the results of awareness to tobacco brands and logos among 1st grade primary school children in the kingdom of Saudi Arabia were investigated. It was observed that the majority of 1st grade school children were familiar with tobacco brands. This could be attributed to several factors such as seeing in the home or neighborhood, or through print and electronic media, or other acquaintances. Multiple studies have reported a significant relationship between children's viewing of tobacco advertisements and their positive attitude towards consumption of such products that they are too young to use. A study on grade 6 and 7 students (age 10–12 years) showed that majority of children when shown the advertisement of a cigarette brand had more positive opinion of the user as compared to those who were shown the picture of the same brand of cigarette [13]. For example, when shown the Benson & Hedges cigarette pack, 18% children thought the user to be interesting, which increased to 44% when shown the advertisement for the same. This rise in numbers was seen in a range of categories. Similarly, studies employing pictures of logos and brand names have reported that children as young as 3 years old could correctly identify logos and advertisements. A study in the United States showed that the three most heavily advertised brands, Camel, Marlboro, and Newport were preferred by 86% of children who smoked [14]. Another study reported that in a survey of 3–6-year-old children, approximately 91.3% of 6-year-old children correctly matched Old Joe with a picture of a cigarette compared with 30% of 3-year-old children [9].

The reason for influence of advertisements on children could be attributed to their lack of understanding of the persuasive intent of the advertisement and lack of awareness leads to higher trust in advertisements and there are some companies of tobacco products consumed millions for advertisement to gain this trust. For example, Arnett and Terhanian [15] reported that advertisement most prevalent among adolescent are for two of the brands they are destined to smoke— Marlboro and Camel. More than 95% of 534 adolescents between 11-18 years old had seen an advertisement shows Joe Camel or the Marlboro Man at least once, and more than 50% had seen these advertisements six or more times. Also, they reported that advertising budgets for the brands as follow 84$ million for Marlboro and 40$ million for Camel.

We found an overall recognition rate of tobacco reaching 53% which was much lower than other products like chips and Pepsi. What is noteworthy is that children were able to recognize the names of cigarette brands, even though tobacco is supposedly an adult product and all forms of media advertising have been controlled in Saudi Arabia. This is a high level of awareness for adult products supposedly not marketed to the survey group. Higher brand recognition rates of up to 95.2% for Samsun (a Turkish cigarette brand) were reported by Emri et al., Recognition rates for other cigarette brand names and logos ranged between 95.2% and 80.8% [16]. This large difference between the recognition rate of cigarettes brand between the Saudi and Turkish children may be related to the unrestricted tobacco advertising and promotion in Turkish media, which have been more controlled in the Saudi channels, due to religious consideration.

Moreover, we observed variability in recognition rate across gender. Boys showed a significantly higher recognition rate to cigarette brands than girls (67.2% vs. 41.4%, respectively). The possible explanation of this might be that boys usually spend most of their time outside their homes and thus are exposed to people who use indigenous tobacco products as compared to girls, who spend most of their time at home. Both boys and girls exhibited similar awareness of logos of other commercial products. Both boys and girls showed a very high recognition to food and drink logos, which indicated their ability to recognize tobacco products. Interestingly, boys seem to be familiar and exposed to Hookah compared to girls. It is not surprising that companies that invest large sums of money in advertising, such as Pepsi and Chips are recognized by almost all the children. One would expect young children to be able to identify such products because they use them. In primary school children, however, high awareness of L&M and Marlboro logo is likely to be due to the style and content of advertising and its appeal to children.

The results presented here support placing restrictions on the tobacco advertisement. Considering the established link between the exposure to tobacco marketing and the increased likelihood of starting to smoke, these findings should be considered to impose more restrictions on promotion, advertisement, and sponsorship of tobacco brands. The national tobacco control program of Saudi Arabia targets to assess the frequency of smoking and its adverse effects on health and economy. Additionally, many policies have been implemented to restrict smoking in educational institutions and banning tobacco advertisements [17]. This study's findings suggest that despite relatively comprehensive bans young children are still exposed to tobacco marketing.

Several studies have suggested the approaches required to reduce the reach of tobacco products from children [18]. For example, the sale of tobacco products should be discouraged near places that are frequently visited by children. Further, the brand logos

could be removed from cigarette packs, which could lessen the attractions towards children. Also, the reach of content non-suitable for children should be monitored to reduce the exposure. Parents or family members who smoke cigarettes should be careful not to smoke near children and children should also be counseled to not use or start using tobacco products. Moreover, health professionals should become more involved in efforts to restrict tobacco usage and implementing stronger control policies such as comprehensive ban on promotion and advertisement of tobacco products.

This study had a few limitations. First, the lower reading and writing skills of children in 1st grade limited the extent of questionnaire. The number of questions was limited and formulated to allow simple answers, thus in-depth study of associations could not be analyzed. Second, the study did not investigate the source of exposure, as having someone in the household who smoked or exposure to media and advertisements could also contribute to the knowledge of tobacco products. Third, the study did not investigate the effect of tobacco marketing and awareness in this age group.

To our knowledge, this is the first study to examine cigarette brand awareness among children in 1st grade school in the kingdom of Saudi Arabia. We found that 5 out of 10 children identified major tobacco brands, and the differences were significant across gender. The results of this study highlight that children in the <6 years of age should also be counseled to discourage use of tobacco products in future.

The study concluded that children in Saudi Arabia are still widely exposed to tobacco products and promotion and more effective regulations and awareness campaigns are needed to combat a generation of nicotine addicts.

Conflict of interest: The authors declare no conflict of interest.

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