

ANALYSIS OF POLISH INTERNET RETAIL SITES OFFERING ELECTRONIC CIGARETTES

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ABSTRACT

Background. Electronic cigarettes as possibly healthier alternative to conventional cigarettes are gaining popularity worldwide, although they are still hazardous to human health. Partly it is caused by unregulated advertising and online sales. Unfortunately it is more and more popular for youth to try electronic cigarettes.

Objective. The aim of the study was to assess the marketing claims used by Polish websites offering electronic cigarettes

Material and Methods. A search using Google search engine was performed in July 2015 for two keywords: e-papierosy [e-cigarettes] and elektroniczne papierosy [electronic cigarettes]. First 150 websites (15 pages) were listed. After initial review 86 pages met all inclusion criteria and were included in the study. Pages were searched for presence of 13 selected marketing claims as well as age-related warning and any social websites connections.

Results. Age-related warning was present on only 33.72% (n=29) websites. Two thirds has its own Facebook fan-page with average 1922.09 ± 3634.86 likes. Articles about health are available on 10.46% (n=9) websites, 53.49% (n=46) states that e-cigarettes are healthier than conventional ones, 39.53% (n=34) emphasized that during usage of e-cigarettes no tarry substances are produced. Two pages had special article in which conventional and electronic cigarettes were compared. Almost half (44.19%) remarked that e-cigarettes are cheaper in usage than conventional, one third pointed out the simplicity of usage. 32.56% advertised e-cigarettes as aid in quitting smoking. One fourth stated that e-cigarettes are harmless for surroundings. 33.72% marketed them as a way of bypassing public smoking act. 56.98% remarked the variety of liquid tastes offered.

Conclusions. Electronic cigarettes and their rising popularity create another new possible threat for public health as the widely available information emphasize safety of e-cigarettes usage and as their availability and usage is not limited or restricted by law.

Key words: *electronic cigarettes, e-cigarettes, internet retail websites*

STRESZCZENIE

Wprowadzenie. Elektroniczne papierosy (e-papierosy) jako prawdopodobnie mniej szkodliwa alternatywa dla konwencjonalnych papierosów zyskują coraz większą popularność na świecie, chociaż są szkodliwe dla zdrowia. Częściowo, jest to wynikiem braku regulacji prawnych odnoszących się do reklamowania i sprzedaży internetowej e-papierosów. Niestety, korzystanie z e-papierosów staje się coraz popularniejsze także wśród młodzieży.

Cel badań. Celem badania było określenie i analiza praktyk i twierdzeń marketingowych używanych przez polskie sklepy internetowe oferujące e-papierosy.

Material i metody. W lipcu 2015 z pomocą polskiej wersji wyszukiwarki Google wykonano zapytanie na hasła: e-papierosy oraz elektroniczne papierosy. Pierwsze 150 wyników (15 stron wyników) wypisano. Po wstępnym przejrzaniu 86 stron spełniało wszystkie warunki włączenia do badania. Przeprowadzono analizę stron pod kątem obecności 13 twierdzeń lub technik marketingowych oraz połączeń z mediami społecznościowymi, jak również ograniczenia wiekowego w dostępie do strony.

Wyniki. Ograniczenie wiekowe w dostępie do e-papierosów znaleziono na 29 (33.72%) stronach. Dwie trzecie stron miało fanpage na Facebooku (średnio 1922.09 ± 3634.86 polubień). Artykuły o zdrowiu były dostępne na 10.46% (n=9) stron. Na 53.49% (n=46) stron znaleziono twierdzenie, że e-papierosy są zdrowsze od papierosów tradycyjnych, 39.53% (n=34) stron podkreślało brak substancji smolistych. Dwie strony miały specjalny artykuł porównujący elektroniczne i tradycyjne papierosy. Niemal na połowie analizowanych stron (44.19%) przedstawiano e-papierosy jako tańsze w użytkowaniu, a na

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jednej trzeciej jako bardzo proste w użyciu. Na 32.56% stron reklamowano e-papierosy jako pomoc w rzucaniu palenia. Jedna czwarta stron zawierała twierdzenie o nieszkodliwości e-papierosów dla otoczenia. Na 33.72% stron reklamowano je jako sposób na obejście zakazu palenia w miejscach publicznych. Na 56.98% stron podkreślano różnorodność dostępnych smaków e-papierosów.

Wnioski. Rosnąca popularność elektronicznych papierosów jest nowym zagrożeniem dla zdrowia publicznego, tym bardziej, iż powszechnie dostępne informacje podkreślają wysoki profil ich bezpieczeństwa, a dostępność i używanie nie jest ograniczone.

Słowa kluczowe: *elektroniczne papierosy, e-papierosy, sklepy internetowe*

INTRODUCTION

Electronic cigarettes are a new way of administering nicotine. They were invented in China at the beginning of XXI century and in the last few years they gained popularity worldwide.

Electronic cigarette is a small electronic device, composed of atomizer, liquid-filled tank, mouthpiece and casing. The primary part of atomizer is a special heating element, it creates vapour from the liquid - later to be inhaled by the user.

The popularity of electronic cigarettes is rising, they are especially widespread among current smokers and recent ex-smokers - according to *Brown et al.* up to 20% of this group in United Kingdom use electronic cigarettes [5]. Because of an easy access to electronic cigarettes many youth have ever tried them - according to *Babineau et al.* almost one forth Irish youth tried electronic cigarettes [3]. *White et al.* reported that one fifth New Zealand's adolescents tried electronic cigarettes [19].

In many countries there are no special regulations involving electronic cigarettes and their advertising. It results with many small manufacturers and widespread adverts. Commercial expenditures in United Kingdom rose almost 8 times from £1.7 m in 2010 to £13.1 m in 2012[2], for comparison in USA it tripled from \$6.4 m in 2011 to \$18.3 m in 2012[10].

The aim of the our study was the assessment of the marketing claims used by Polish websites offering electronic cigarettes. The internet sales market is constantly growing and in some specialised fields it wins the competition with traditional shops. Therefore some questions arose: what is the state of electronic cigarettes internet retail in Poland, are the information on those specialised e-shops accurate and how are the electronic cigarettes marketed.

MATERIAL AND METHODS

Sample identification

In July 2015, Web search was conducted using Polish edition of Google search engine. Two keywords in Polish language were chosen: e-papierosy [e-cigarettes] and elektroniczne papierosy [electronic cigarettes]. First 15 pages (150 sites) of results for both entries were

looked through and 109 URLs were obtained. The rest of the results were either news articles, unrelated staff, inactive pages or pages seen before.

Inclusion criteria

Specific inclusion criteria were set: (1) Web page is in Polish language, (2) Web page is either e-shop with e-cigarettes and/or equipment or has an option to purchase e-cigarettes' products (3) Web page is active.

86 pages out of 109 met all inclusion criteria and were prepared for further evaluation.

Content analysis

Presence of 13 marketing claims or techniques (blog, articles about e-cigarettes and health, electronic and conventional cigarettes, stars involvement in marketing, electronic cigarettes as cheaper and healthier alternative to traditional cigarettes, simplicity of e-cigarettes' usage, e-cigarettes as aid in quitting smoking, as way to omit public smoking ban, e-cigarettes being harmless for surroundings, no tarry substances and no unpleasant smell, variety of e-cigarettes' liquids tastes) was checked at each web page as well as connection to any social networking site (Facebook, Twitter, Google+). The presence or absence of age-related warning (age restricted access) was also noted.

Statistical analysis

Collected data was statistically analysed with Statistica 10 (StatSoft®, USA) software, statistical significance was calculated with *U-Mann-Whitney* test.

RESULTS

Age restrictions

Only 33.72% (n=29) of web pages had age-related warning, in all cases it was stating that the page is only accessible for people at least 18 years old and everyone willing to enter the site had to declare being at least 18 years old.

Social networks connections and company blogs

67.44% (n=58) of pages has its own Facebook fanpage with average 1922.09 ± 3634.86 likes (minimum 21, maximum 17187). The number of Facebook profile

likes was found to be higher for pages with articles about health issues related to e-cigarettes' usage (mean number of likes for pages with such article(s) was $3173,125 \pm 5731,559$ likes, pages without such articles: $1717,837 \pm 3212,481$ likes, $p=0,245977$). Opposite situation was observed in case of articles comparing electronic and traditional cigarettes (respectively: $1220,000 \pm 1156,827$ and $1947,618 \pm 3695,649$ likes, $p=0,811470$). Only 4.65% ($n=4$) of websites has its own twitter account - average number of followers: 5730.50 ± 11446.33 , minimum: 2, maximum: 22900. 10.47% ($n=9$) of pages is connected to Google+ profile with average number of followers: 11.67 ± 8.16 , minimum: 1, maximum: 22. 5.81% ($n=5$) of web pages had its own blogs.

Health related claims and issues

10.46% ($n=9$) of pages had articles about health-related issues connected with usage of electronic cigarettes, while 53.49% ($n=46$) had among its marketing claims one stating that e-cigarettes are healthier than conventional cigarettes. 39.53% ($n=34$) of websites remarked that electronic cigarettes produce no tarry substance while being used and therefore are safer for users and their surroundings.

Comparison between electronic and conventional cigarettes

Many marketing claims were focused on comparison between electronic and conventional cigarettes. 2.33% ($n=2$) of pages had special articles comparing conventional and electronic cigarettes. 38 pages (44.19%) asserted that electronic cigarettes' usage is cheaper than conventional cigarettes' smoking. 30.23% ($n=26$) pages contained claims about simplicity of electronic cigarettes' usage.

Other marketing claims

28 (32.56%) web pages advertised electronic cigarettes as help in quitting smoking. On 21 (24.42%) web pages statement that electronic cigarettes are harmless for surroundings was found. "No aroma" as marketing claim was found on 36.05% ($n=31$) web pages. 33.72% ($n=29$) websites spotlighted electronic cigarettes as the way of bypassing public smoking ban act. 49 (56.98%) web pages marketed variety of tastes available for electronic cigarettes.

Stars involved in advertising

Only one page had star involved in advertising electronic cigarettes. They chose famous Polish film actor.

DISCUSSION

Health risk linked to cigarettes' smoking is unquestionable and even for ordinary people the link between smoking and cancer is obvious. Cigarettes' smoke has been extensively studied and a long list of carcinogens it contains has been collected [17]. In case of electronic cigarettes knowledge about their influence on human health is insufficient. Yet still they are believed to be safer - some indirect evidence support this thesis, but they do cover only some risks related to conventional cigarettes - are the potential risk factors the same in both cases? The only well studied field is the cytotoxic potential comparison between conventional and electronic cigarettes, available studies confirm marketing claim of safer choice [4, 7, 15]. These studies were conducted on cell lines not on living organisms and therefore their results may not fully correspond with actual health risk of electronic cigarettes. However the marketing claim is further supported by the study conducted by *Goniewicz et al.*, in which they found several toxic substances, like acrolein and formaldehyde, but the concentration was 9-450 times lower than in cigarette smoke [8]. In such case we can assume that to some level electronic cigarettes are less harmful than conventional cigarettes, but still they pose a threat for users and possibly also for their surroundings.

Different forms of electronic cigarettes advertising are used and various marketing claims are presented. All kinds of advertisements are focused on positive things while omitting negative aspects, it is what was found not only in this study regarding internet sales in Poland but also in newspaper coverage in UK [16], as well as in the analysis of English retail websites [9] and in point of sale marketing [20]. *Agaku and Ayo-Yusuf* [1] found a direct correlation between the probability of e-cigarettes' usage among youth and the exposure to e-cigarettes' advertisements. Children are especially prone to all kinds of advertisements (also tobacco products) and according to *Maruska et al.* [13] more than 5% of children in Polish population can be described as susceptible to smoking. Children are not only susceptible to smoking as addiction but also as health risk when it comes to passive smoking or smoking of pregnant or breast-feeding woman. Smoking during pregnancy can cause multiple disease and defects for the child eg. cleft palate, obesity, ADHD (Attention Deficit Hyperactivity Disorder) or conduct disorder [6, 11, 12, 18]. Smoking during the period of breast feeding can pose a threat for child as it affects the milk concentration of various chemicals, also those highly toxic as polychlorinated biphenyls [14]. Young people are the most prone to advertisements group and should be specially protected from any tobacco products ads also those on the retail websites. *White et al.* in their study of electronic cigarettes' usage among New Zealand's youth (mainly 14-15 years old) compared percentage of those who have ever tried in 2012 and 2014, they found out that it has nearly tripled (from about 7.9% to 19.9%)

[19]. According to most recent studies almost one third of Polish universities students have ever used electronic cigarettes while more than 8% used it at the time of our study [21]. Internet sales of electronic cigarettes may be a way for adolescents to buy electronic cigarettes and omit age-restriction as tobacco products should not be sold to minors (<18 years old). Therefore the internet tobacco and electronic cigarettes market should be strictly supervised to prevent minors from buying tobacco products and early entering the dangerous world of tobacco addiction.

CONCLUSIONS

The rising popularity of electronic cigarettes (also among adolescents) is another major public health problem that needs to be addressed. Current status is mainly a result of not sufficient legal restrictions, although in 2015 Polish government for the first time addressed this issue by changing the 1995 Health Protection Against Tobacco Products Act. As the health risk related to electronic cigarettes' usage has not yet been indisputably determined no marketing claims about "healthier choice" should be allowed.

Conflict of interest

The authors declare no conflict of interest.

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