โฆษณาบุหรี่ไฟฟ้า: เชื่อถือได้หรือไม่

Electronic cigarette advertisements: Are they trustable?

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บทคัดย่อ

ความชุกของการใช้บุหรี่ไฟฟ้าในเยาวชนได้เพิ่มขึ้นอย่างต่อเนื่องทั่วโลก ซึ่งได้รับการพิสูจน์แล้วว่ามีความเกี่ยวข้องจากการรณรงค์ทางการตลาดและการโฆษณาจากอุตสาหกรรมยาสูบ อุตสาหกรรมยาสูบได้คิดค้นและพัฒนาอุปกรณ์บุหรี่ไฟฟ้าและผลิตภัณฑ์ที่เกี่ยวข้องอย่างรวดเร็วและต่อเนื่องเพื่อผลิตผลิตภัณฑ์ยาสูบที่สะดวก ก่อให้เกิดการเสพติดสูง สามารถใช้กันได้อย่างแพร่หลายทั่วโลก อุตสาหกรรมยาสูบใช้ช่องทางการสื่อสารเพื่อนำเสนอผลิตภัณฑ์ยาสูบที่แตกต่างกัน เพื่อดึงดูดความสนใจของเยาวชน เช่น การใช้สื่อสังคมออนไลน์ สื่อสิ่งพิมพ์ โทรทัศน์ และวิทยุ ผ่านกลยุทธ์การโฆษณาที่หลากหลาย เช่น การโฆษณารสชาติที่หลากหลายของบุหรี่ไฟฟ้าซึ่งคิดค้นมาให้ดึงดูดใจเยาวชนโดยเฉพาะ รูปลักษณ์และสีสันที่สดใสของอุปกรณ์บุหรี่ไฟฟ้า การแสดงภาพการใช้บุหรี่ไฟฟ้าโดยผู้มีอิทธิพลในสื่อสังคมออนไลน์ อุตสาหกรรมยาสูบได้นำเสนอข้อมูลอันเป็นเท็จต่อสาธารณชนอย่างต่อเนื่องทั้งทางตรงและทางอ้อม เพื่อดึงดูดและชักชวนเยาวชนให้ทดลองและใช้บุหรี่ไฟฟ้า โดยไม่คำนึงถึงผลกระทบที่มีต่อสุขภาพ ซึ่งตรงกันข้ามกับข้อเท็จจริงที่ได้รับการยืนยันจากการศึกษามากมายว่าการใช้บุหรี่ไฟฟ้ามีผลต่อสุขภาพทั้งในระยะสั้นและระยะยาว อีกทั้งมีผลในการเสพติดนิโคตินอีกด้วย ดังนั้นบุคลากรทางสุขภาพตลอดจนผู้กำหนดนโยบายควรให้ความสำคัญในการควบคุมการตลาดและการโฆษณาที่บิดเบือนข้อเท็จจริงของบุหรี่ไฟฟ้าจากอุสาหกรรมยาสูบ

คำสำคัญ: บุหรี่ไฟฟ้า โฆษณา การตลาด อุตสาหกรรมยาสูบ

Abstract

The prevalence of e-cigarette use or vaping among youths has constantly increased worldwide which has been proven to be associated with massive marketing and advertising campaigns from the tobacco industry. This article aimed to present key facts that the public should be aware of e-cigarette use and the marketing tactics which have been used to advertise e-cigarettes by the tobacco industry. The tobacco industry has quickly and continuously innovated and developed e-cigarette devices and related products to produce highly addictive and world widely utilizable tobacco products to facilitate and motivate vapers' use. The tobacco industry has used different communication channels to attract the attention of youths such as social media, print, TV, and radio to deliver messages about its products by using a variety of advertising tactics such as the myriad of flavors that specifically appeal to youths, the appearance of vibrant colors of the e-cigarette devices, a portrayal of e-cigarette used by social media influencers or celebrities, etc. The tobacco

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industry has continuously conveyed significant misrepresentation of information to the public to attract and persuade youths to try and use e-cigarettes and related products in both direct and indirect ways without concern of its substantial effects on health, contrasting with the facts, e-cigarette use has confirmed from numerous studies regarding the potential for various short- and long-term health effects as well as nicotine addiction. Therefore, healthcare providers and policymakers should seriously control the marketing and advertising of distorting information about e-cigarettes and related products by the tobacco industry.

Keywords: Electronic cigarette, Advertisement, Marketing, Tobacco industry

Introduction

The World Health Organization (WHO) has recently launched a new campaign entitled "Stop the lies" which mainly emphasizes the tactics of the tobacco industry in marketing and advertising tobacco products, particularly in electronic cigarettes (e-cigarettes) which are especially targeting the children and youths. The issues of public awareness of youth's health protection and tobacco industry interference in tobacco control policies have been globally raised[1].

The use of e-cigarettes or vaping among youths and young adults has constantly increased worldwide and it was proven to be driven by massive advertising campaigns from the tobacco industry[2]. The exposure to advertisements of e-cigarettes on various mediums, i.e., social media, websites, gas stations, and convenience stores has been confirmed to be significantly associated with e-cigarette use among youths even though in a group of e-cigarettes naive[3]. There are numerous tactics that the tobacco industry tries to lie to the public for decades by spreading misinformation through social media influencers, sponsoring the events, funding biased research, and promoting corporate social responsibility initiatives etc,[1] Thus, we cannot ignore the influences and impacts of deadly tobacco industry advertisements misleading the perception of the children and youths who are our future generation to believe that e-cigarette is a safer option for their health. This article intently disclosed the information regarding e-cigarette and related product use, key facts that the public should be aware of e-cigarette, and marketing tactics which have been used to advertise e-cigarettes. This information is beneficial for all healthcare providers, policymakers, and other readers to knowingly recognize the effects of e-cigarette use, be aware of its consequences which include physical, mental, economical, social, and ecological aspects, and not be victims to believe in distorted information delivered from the tobacco industry.

This article aims to explore the facts of e-cigarette use, and tactics of the tobacco industry used in marketing and advertising e-cigarettes and related products to raise awareness of healthcare professionals as well as policymakers to find the solutions in both national and global levels to counter the tobacco industry.

What are electronic cigarettes and how have it been developed?

The electronic cigarettes (e-cigarettes), also called Electronic Nicotine Delivery Systems (ENDS) or vaping, are battery-operated devices that generate heat by the battery to produce an aerosol of liquid solution mainly containing liquid nicotine and myriad chemical substances. The e-cigarettes operate by three main basic components including (1) a battery to generate heat, (2) a metal heating element, and a liquid solution[4].

E-cigarettes first emerged in tobacco markets in the early 2000s as a safer option with a specific purpose for smoking cessation aid to combustible cigarettes (traditional or conventional cigarettes)[2, 5, 6.] In the past almost 3 decades since e-cigarettes were introduced to the public, it has been progressively innovated and developed in four generations to serve the needs and satisfaction of the users or vapers[4]. The first generation of e-cigarettes was called a "cig-alike" or "cigalikes"[7] which was intentionally created for smoking cessation by a Chinese pharmacist named Hon Lik. The first generation of e-cigarettes was created to imitate the appearance of combustible cigarettes of the same size and had a red light-emitting diode (LED) at the end of the e-cigarette body[2]. This generation of e-cigarettes are commonly disposable or reloadable cartridges for repeated use[7].

The second generation of e-cigarettes called "vape pens" or "the pen-like shape" were designed to create a larger battery and a refillable tank system for e-liquids allowed the vapers to fill and refill varying nicotine strengths and flavorings. The refillable tank system caused the explosion of the e-liquid industry and availability of unregulated flavors as well as other e-liquid substances such as tetrahydrocannabinol (THC) oils, the active component of cannabis[2, 4, 8].

The third generation of e-cigarettes is commonly known as modifiable ("mods") or personal vaporizers because the wattage and voltage are modifiable[7]. This generation was innovatively combined with a tank system with a larger battery providing a bigger amount of electrical power to the liquid, less frequent need for battery charging, greater aerosol, and faster nicotine delivery to the vapers compared to the previous generations[4]. The most current generation of e-cigarettes, the fourth generation, was called "pod-style" e-cigarettes[4] or "pod-mod" devices[6]. Up until now, "JUUL" has been the most popular e-cigarette product of this generation which is specially designed to attract particularly the youth users. These novel e-cigarette devices have small sleek design, rectangular, user-friendly function, and look like a computer thumb drive which were portable, accessible, be able to surreptitiously used in place where smoking is forbidden and offer numerous of desirable flavors[4], [6, 7]. In addition, benzoic acid was used to mix with an e-liquid solution to lower the chemical pH nicotine resulting in less harshness on the throat and more fascinating to the vapers[4]. Lately, more technological advances of e-cigarette products have been established from the tobacco industry such as car fobs, coffee cups, credit cards, mobile phones, or tic-tac boxes. Surprisingly, some e-cigarette devices were designed to look like asthma inhalers[5].

The quick and constant development of e-cigarette devices and related products of the tobacco industry has demonstrated a strong standpoint to create highly addictive, world widely utilizable, and profitable tobacco products to facilitate public use, unfortunately, especially targeted youths who are our future generation[4].

What key facts should the public be aware of e-cigarette use?

The tobacco industry firms have betrayed the public trust by continuously conveying significant misrepresentation of information to the public by using numerous tactics of marketing and advertising causing an epidemic of smoking-related diseases among young people4. The key facts about e-cigarettes that should the public be aware are include harm-related e-cigarette use, nicotine addiction, and the effectiveness of tobacco cessation by using e-cigarettes.

Besides the e-cigarette devices, the major component of the e-cigarette that is used to create

vaporization is e-liquid or e-juice[7]. There are at least 3 main ingredients contained in e-liquid which, either by using alone or in combination, evidently proved to have potential health risks to the vapers, including psychoactive agents known as nicotine, solvents, and flavoring compounds[2, 7].

The first main ingredient of e-liquid is nicotine. There are two chemical formulations of nicotine in e-liquid which are nicotine freebase or pure nicotine and nicotine salt. Nicotine salt is currently a preferable formulation because the use of high concentrations of nicotine freebase is unpleasant. The mixing of nicotine salt with benzoic acid allows e-liquid formulation to contain higher nicotine concentrations (up to 50 mg/mL) resulting in increasing potential for nicotine addiction among the vapers[2].

The second ingredient of e-liquid is a solvent containing propylene glycol (PG) and vegetable glycerin (VG) which primarily affects the vaporization or cloud formation[5, 6, 8].

The third ingredient of e-liquid is flavoring compounds. There are over 7,000 commercially available e-liquid flavoring agents with uncertain toxicologic profiles. There are several health concerns of proprietary blends of flavoring chemicals mixed in e-liquid, i.e., diacetyl (2,3-butanediol) which was found associated with bronchiolitis obliterans, terpenes which was found associated with lung necrosis in pediatric clients, and vitamin E acetate (or tocopheryl acetate) commonly used for THC e-liquid which strongly associated with E-cigarette or Vaping used-associated with Lung Injury (EVALI). Moreover, e-liquid also contained small amounts of other chemical substances and heavy metals considered as toxic or carcinogenic substances such as acrolein, acetaldehyde, nickel, and lead[5, 8]. In addition, there is a high concern about numerous unregulated, customized, and homemade e-liquids used and selling via social media which completely unknown the ingredients as well as health effects to the vapers[2] together with an application and combination of e-liquid contained other addict substances such as marijuana and methamphetamine with e-cigarettes for vaping[7].

Based on the main chemical components of e-cigarettes, the evidence-based information has confirmed that e-cigarettes or vaping caused various pathologic effects in both short- and long-term to the users[6]. The most common short-term adverse health effects associated with e-cigarette use include mild irritation of the mouth and throat, headache, dry cough, and nausea[6]. Moreover, the most common serious health concern of e-cigarette use is e-cigarette-associated lung injury specifically called EVALI. Over 2,800 cases of lung injury with more than 60 confirmed deaths from e-cigarette use had been reported to the Center for Disease Control and Prevention (CDC), USA since 2019[2]. EVALI, a sterile inflammatory pneumonitis, usually presents to the hospital with cough, chest pain, and dyspnea leading to hospitalization and even death[8]. The pathophysiologic changes regarding EVALI according to the criteria of the CDC include recent vaping, pulmonary infiltration on chest imaging, and the absence of pulmonary infection. In addition, it has been found that most EVALI cases used e-liquids added with THC or nicotine which usually contained vitamin E acetate commonly purchased from non-regulated sources such as black/gray markets[2].

Obstructive lung diseases are another health concern among vapers. There were studies showing that e-cigarettes were associated with increased probabilities of asthma, cough and bronchitis in youths who use e-cigarettes[7] as respiratory function was disturbed by e-cigarette aerosols containing various carcinogenic and irritating substances[8]. Moreover, in animal studies,

increased airway hyperreactivity, cytokine expression, protease expression, mucin production, and distal airway enlargement were found in mice exposed to e-cigarette fluid[2].

As we have known for decades, there are various significant cardiovascular effects from combustible cigarettes such as increased risk of myocardial infarctions, chronic vascular disease, and heart failure. Increased heart rate, raised blood pressure, signs of oxidative stress, and impaired vascular flow have also been found associated with e-cigarette use resulting in increased risk of cardiovascular diseases as well as in combustible cigarettes[2,7].

Another problematic health issue of e-cigarette use among youths is the potential for long-term effects on brain development and behavior as well as increased risk of mood and attention symptoms. Nicotine acetylcholine receptors control critical aspects of brain development and exposure to nicotine, even in low doses, can negatively affect brain development resulting in cognitive problems and increased dose of nicotine use later in life[6].

Moreover, passive exposure to e-cigarette emissions also caused pulmonary and extrapulmonary risks. The exposure to secondhand smoke from e-cigarettes has been found to induce asthma exacerbation, pulmonary inflammation, and increased serum cotinine concentration among people with passive e-cigarette exposure similar to that of combustible cigarettes[2].

In terms of nicotine addiction concerns from e-cigarette use, most e-liquid contains a variety of nicotine strengths between 15 and 50 mg/mL. Self-administering of different nicotine strengths can lead to nicotine toxicity and potential nicotine overdose among youths in which high amounts of nicotine can be absorbed in a short period. Regular consumption of nicotine through e-cigarettes can lead to nicotine withdrawal symptoms which can be found after as little as a few weeks of e-cigarette use and it can disturb the normal daily functioning of the vapers[8]. The levels of nicotine tested by urine sample among youths who are exclusive e-cigarette users were very high (ranged from 135 – 906 ng/ml in different brands of e-cigarettes in the pod system, i.e., JUUL, Bo, Phix) and higher than among exclusive combustible cigarette users[5, 7].

Even though e-cigarettes were created as a tobacco cessation method for combustible cigarettes, there is limited and insufficient evidence regarding the ability and effectiveness of e-cigarettes to promote tobacco cessation compared with no treatment or with other cessation treatments suggested by US Food and Drug Administration (FDA), thus, scientific evidence has no longer supported the effectiveness of e-cigarettes in aiding tobacco cessation[5, 7].

Therefore, based on the facts of e-cigarettes mentioned earlier, the public should be aware that e-cigarette use has confirmed the potential of short-term and long-term health effects for youths as well as the potential for nicotine addiction unless proven otherwise. In addition, e-cigarettes should not be used or recommended as an option for tobacco cessation in all age groups of smokers.

What marketing tactics have been used to advertise e-cigarettes?

The substantially increased prevalence of e-cigarette use among adolescents and adults worldwide has been significantly associated with the massive advertisements from the tobacco industry[9, 10, 11, 12]. Since e-cigarettes have been globally appearing to the public, the tobacco industry has uses various innovative marketing tactics to attract adolescents and young adults to try and use them[2]. In 2021, the tobacco industry has reached approximately 20.4 billion US dollars of market value

globally in e-cigarettes and it was projected to continue rapidly grow to reach about 30 billion US dollars by 2027 through significant increases in expenditure for marketing communication to the customers both non-vapers and current vapers in order to inform, persuade, and remind them in both direct and indirect ways about the e-cigarette products and brands they sell. For instance, in the popularity of the Juul vape brand in the first half of 2019, there were 104 million US dollars spent on advertising of this product across several communication channels[13]. In the USA, the majority of e-cigarette advertising expenditures were concentrated on print (58.9%), TV, (20.6%), and radio (14.4%) which peaked in 2018/2019 and suddenly declined in 2020 due to the implementation of the tobacco federal policy called Tobacco 21[12]. The tobacco industry has shown the intention to interfere with the public health activities of e-cigarettes. A study has revealed that much more advertisements and commercial messages were tweeted or delivered on Twitter platform by the tobacco industry especially on days with important announcements by the FDA, doing this, may alter the information shared by the FDA[14].

One tactic of e-cigarette advertisement campaigns especially targeting youths who are curious to know and try a new thing is a variety of flavors or "flavored cigarettes". This is a significantly different smoking experience that vapers receive from e-cigarettes, especially those who dislike the taste, smell, and harshness of combustible cigarettes[6]. There are numerous flavors advertised on social media and websites to persuade vapers to explore a new experience of vaping. Moreover, new custom flavorings of e-cigarettes have emerged on the market almost every day offering vapers to try such as chocolate marshmallows, strawberry vanilla cupcake milkshakes, and half-baked snickerdoodle[2]. One study assessed the youths about their perception regarding the flavoring of e-cigarettes and found that they perceived that the tobacco and e-liquid industries used a variety flavor to appeal to youths especially the sweet and fruity flavors such as ice-cream, sweetie, grape, and blueberry[15].

In addition to the production of numerous hazardous e-liquid flavors, another tactic that the tobacco industry uses to advertise e-cigarette products with the intention to attract youths' attention to use e-cigarettes is the appearance of vibrant colors of the e-cigarette devices. Bright and positive colors of e-cigarette devices such as pink and green were designed and advertised on social media which drew the youths' attention to stop and look at the post about its appearance even among never or non-vapers[15]. Moreover, large, flashy devices which are usually combined with e-liquid to produce an opaque vapor cloud can also appeal and influence the vapers to try on it. The demonstration of vaping tricks on how to form large clouds and shapes was found in thousands of online videos that are fascinating to youth vapers[2].

The tobacco industry used diverse words and messages in marketing communication of e-cigarettes. One study concluded 10 key messages (17 sub-messages) found on various communication channels regarding e-cigarettes which include cessation (smoking cessation), Health-related benefits (health benefits/claims, harm reduction, healthy image), sociability/lifestyle (sociability, success, lifestyle), use experience (enjoying vaping (everywhere), taste/flavor), product characteristics (product design, quality/certification), price (discount or price advantage), youth (youth-resonant information), warnings/disclaimers (health disclaimers/warnings, age restriction), purchase information (information for easy purchase), and others (miscellaneous information). All of the messages the tobacco industry released to the

public seemed to mislead the customers, especially youths, to believe that e-cigarettes were safe, socialized, effective tobacco cessation tools, and harm reduction, while, without scientific evidence support. In addition, the communication channels of e-cigarette advertising included Internet, print, point of sale (POS)/ retail stores, and TV/movie/radio. The marketing communication strategies used were advertising, public relations, sales promotion, and personal selling[13].

Social media influencers or celebrities who have a huge following on the social media platforms were frequently used by the tobacco industry as another tactic to advertise e-cigarette products to the youth. Nowadays social media is a popular communication channel used by youths and messages conveyed via this channel have high power to influence the viewers, especially youths, to believe as they are portrayed. The portrayal as 'cool' and 'fashionable' while using e-cigarettes was a common way of communication by social media influencers. Moreover, the tobacco industry has used emotional connections and positive portrayals of e-cigarettes when communicating with customers through social media. Social media influencers or general people posted something regarding e-cigarette use in a way that presented feelings of 'looked happy' while using e-cigarettes or posting text by using some emojis to enhance the message's meaning and draw more attention from the viewers[15].

The exposure of e-cigarette advertisements appears to be significantly positively associated with an increasing rate of e-cigarette initiation and use among youths[11, 12], thus the public policies and regulations to control the advertisement of e-cigarettes by using high power influencers via common communication channels among youths such as social media should be initiated and strengthened.

Conclusion and recommendation

The tobacco industry has used different communication channels and a variety of advertising tactics to convey distorted information to the public to attract and persuade youths to try and use e-cigarettes. Based on the scientific evidence, e-cigarette use has been evidently confirmed to have the potential for various short- and long-term health effects and also cause nicotine addiction. Therefore, it's crucial for national and international policymakers and all healthcare disciplines especially professional nurses in knowingly understand the marketing tactics to protect next generation by collaborating in stopping the tobacco industry from lying to the public as the WHO campaign, ***"Stop the lies"*** [1, 16].

- **Recommendation for public health policy:** Tobacco control policy should be strengthened and extended to regulate digital advertising and marketing of e-cigarettes and related products including promoting of information about the harmful effects of e-cigarettes and secondhand smoke from e-cigarettes to the vapers and others as well as countering the interference of tobacco policy from the tobacco industry.

- **Recommendation for practice and implementation:** Healthcare professionals should initiate proactive, aggressive, and practical health education to provide fact information about e-cigarettes to children and youths to be aware of its effects to the health, economic, and society caused by e-cigarette use. This information will also be an immune for them when faced with advertisements from different unregulated communication channels.

- **Recommendation for further research:** The research aimed to explore the effectiveness of e-cigarette prevention program specially designed for children and youths should be initiated and implemented.

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