E- CIGARETTES: IMPACT ON YOUTH GENERATION

Dr. Smriti Khara
Assistant Professor
Department of Public Health
Bharti Vishwavidyalaya, Durg

ABSTRACT

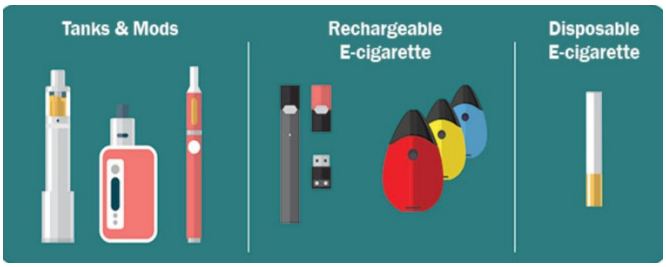
Although ENDS or e-cigarettes are frequently thought of as a smoking cessation tool, their effectiveness and safety as such have not yet been conclusively proven. Despite some smokers' claims to have reduced their smoking while using ENDS, the overall nicotine intake appears to have remained the same.Due to the varying sizes of e-liquid vials, variable nicotine levels in each vial, unrestricted use, and changing nicotine levels in each vape puff, e-cigarettes appear to be about as effective as nicotine patches as a quitting aid. Furthermore, a sizeable percentage of former smokers who say they stopped smoking cigarettes with the help of ENDS say they still use the latter product, maintaining their reliance on nicotine. While vaping poses a serious risk to the health and safety of Indian teenagers, marketing and sales of e-cigarettes have been illegal in India since September 2019. E-cigarettes were first touted as a solution to stop smoking when they were first released by manufacturers in 2006.They immediately became a popular way to consume cigarettes and other narcotics including fentanyl and marijuana. Teenagers started using e-cigarettes in great numbers. The Centres for Disease Control and Prevention (CDC) list several risks associated with e-cigarettes. They are to blame for young individuals developing a cigarette addiction. They make it easier for people to overuse illegal narcotics, which can result in overdoses. They may harm the lungs as well. One instance of an effective public health intervention is a national campaign to prevent youth e-cigarette usage.

Keywords: E-cigarettes, ENDS, Nicotine, Vapes, Adolescents

INTRODUCTION

Electronic cigarettes, also known as e-cigarettes, e-cigs or Electronic Nicotine Delivery Systems (ENDS), are inhalation devices that deliver an aerosol created by heating a solution, usually composed of propylene glycol or glycerol (glycerine) and flavourings, generally with nicotine. E-cigarettes come in many shapes and sizes. Most have a battery, a heating element, and a place to hold a liquid.E-cigarettes produce an aerosol by heating a liquid that usually contains nicotine —the addictive drug in regular cigarettes, cigars, and other tobacco products—flavourings, and

other chemicals that help to make the aerosol. Users inhale this aerosol into their lungs. Bystanders can also breathe in this aerosol when the user exhales into the air.E-cigarettes are known by many different names. They are sometimes called “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems (ENDS).” Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items. Larger devices such as tank systems, or “mods,” do not resemble other tobacco products. Using an e-cigarette is sometimes called “vaping-cigarettes can be used to deliver marijuana and other drugs. The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including: Nicotine, Ultrafine particles that can be inhaled deep into the lungs, Flavouring such as diacetyl, a chemical linked to a serious lung disease, Volatile organic compounds Cancer-causing chemicals, Heavy metals such as nickel, tin, and lead.It is difficult for consumers to know what e-cigarette products contain. For example,some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.



HEALTH EFFECTS OF USING E-CIGARETTES

E-cigarettes are still fairly new, and scientists are still learning about their long-term health effects. Here is what we know now.

Most e-cigarettes contain nicotine, which has known health effects.Nicotine is highly addictive& toxic to developing foetuses. It can harm adolescent and young adult brain development, which continues into the early to mid-20s.Nicotine is a health danger for pregnant adults and their developing babies.

Besides nicotine, e-cigarette aerosol can contain substances that harm the body.This includes cancer-causing chemicals and tiny particles that reach deep into lungs. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products.Disposal of waste from e-cigarettes and the manufacture of e-cigarettes could also pose potential environmental hazards.E-cigarettes can cause unintended injuries.

Defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries. Most explosions happened when the e-cigarette batteries were being charged.The Food and Drug Administration (FDA) collects data to help address this issue. You can report an e-cigarette explosion, or any other unexpected health or safety issue with an e-cigaretteIn addition, acute nicotine exposure can be toxic. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes.

Bottom Line on the Risks of E-cigarettes for Kids, Teens, and Young Adults

The use of e-cigarettes is unsafe for kids, teens, and young adults.Most e-cigarettes contain nicotine. Nicotine is highly addictive and can harm adolescent brain development, which continues into the early to mid-20s.E-cigarettes can contain other harmful substances besides nicotine.Young people who use e-cigarettes may be more likely to smoke cigarettes in the future.

HARM TO NON-USERS

ENDS have adverse health impacts even when people are exposed to second-hand vapours. Passive exposure to vapours during pregnancy can severely affect the health of both the mother and foetus. There are reports of poisoning due to accidental swallowing by children. These devices also can cause fire and explosion.

GATEWAY TO NICOTINE ADDICTION AND SMOKING

Studies have found that youths using ENDS or e-cigarettes are more likely to use regular cigarettes later. E-cigarettes increase the likelihood to experiment with regular tobacco products and increase intention to indulge in cigarette smoking. They also increase the risk of dual use due to lack of awareness about the harmful effects of ENDS

OUTBREAK OF LUNG INJURY ASSOCIATED WITH THE USE OF E-CIGARETTE, OR VAPING, PRODUCTS

Worldwide, e-cigarette popularity and use among adolescents and children has increased alarmingly India conducted in 2019 showed ‘ever use’ of e-cigarettes among adolescents to be 2.8%. However, there is dearth of qualitative data on adolescent use of e-cigarettes in the country. This study was conducted to explore and gain better understanding on adolescents’ perceptions and practices about e-cigarette use. Methods: In-depth interviews were conducted with 24 adolescents who self-reported use of e-cigarettes. The participants were recruited from ten municipal schools of Mumbai, India that cater to students from lower socioeconomic background. Participants were from 7th to 9th grades, and aged 11-16 years. Data from in-depth interviews were analyzed using inductive thematic analysis. Results: Adolescents referred to ‘e-cigarette’ as ‘pen-hookah.’ E-cigarettes were perceived as relatively harmless compared to regular hookahs and conventional cigarettes. Initiation was influenced by a friend, peer, or sibling. A variety of flavours, the after-taste, the ability to perform playful tricks with smoke, and fun-time spent with friends were cited as reasons for continued use. Social media influenced both initiation and continuation. Most adolescents’ regular use was with a group of friends; the device was shared with or obtained from friends or siblings.Adolescents were unclear about the presence of nicotine in refill liquids and the harmful health effects.

ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS) AS A TOBACCO CESSATION AID: MYTHS AND REALITY

ENDS or e-cigarettes are popularly perceived as a smoking cessation aid, but their efficacy and safety as a quitting aid have not yet been firmly established. Although some smokers claim to have cut down smoking while using ENDS, the total nicotine consumption seems to remain unchanged. E-cigarettes seem to have rather similar or even weaker efficacy as a cessation aid when compared to nicotine patches, due to different sizes of e-liquid vials, variable amount of nicotine in each vial, uncontrolled number of vapes and variable amount of nicotine in each vape puff. Moreover, a considerable number of ex-smokers who have reported stopping cigarette use with the aid of ENDS continue using the latter product, thus sustaining nicotine dependence. In a four-country survey carried out between July 2010 and June 2011 in the United States, the United Kingdom, Canada and Australia, 70.4 per cent of the study subjects reported to have used ENDS as a way to obtain nicotine in smoke-free spaces, indicating that ENDS were being used to satisfy nicotine addiction during periods of forced abstinence. There is very limited evidence regarding the impact of ENDS on tobacco smoking cessation, reduction in cigarette use or adverse health effects. The International Association for the Study of Lung Cancer does not recommend the use of e-cigarettes for treating nicotine dependence even in cancer patients, due to the absence of sufficient evidence on their efficacy and safety. The Indian Medical Association considered ENDS as an unhealthy and disguised form of tobacco addiction, with serious long-term health effects and unfit to be used for tobacco cessation.

Marketing And Promotion

ENDS are advertised through various forms of media (print, television and internet), with youth being the target group. These products are advertised as a socially attractive trend for attracting young people and have already gained significant popularity over social media. They are being marketed as safer alternatives to conventional cigarettes or harm reduction products, in a glamorous manner, so as to make them attractive under the guise of being less harmful. These techniques are aimed at targeting the youth and children. Some of their advertisements also suggest that these products can be used for bypassing the smoke-free rules. It is also noteworthy that major tobacco companies have purchased or developed ENDS products, with the dual commercial intent of expanding their range of tobacco products while touting their ability to offer a product that they claim reduces harm from the cigarettes. Cigarette smokers who may

have otherwise given up the habit are thereby retained as nicotine-addicted customers, while those who may have never attempted to experiment with cigarettes are drawn into the nicotine addiction web. This duality of product marketing is a business strategy adopted by tobacco companies who see conventional cigarette smoking diminishing in many countries. What is alarming is that the market for ENDS continues to grow rapidly, supported by relatively low barriers to entry and thus allowed many businesses to bring a diverse set of products to consumers through a variety of channels.

MONITORING AND REGULATION

Monitoring of these products differs amongst various countries. For example, in the United Kingdom, these are regulated as medicines from 2016, for ensuring their quality and safety, but some countries have introduced restrictions on the sale and use of ENDS. The sale of e-cigarettes is completely banned in 25 countries, including Brazil, Norway and Singapore, while market authorization is required in 17 other countries. In the United States, ENDS that are marketed for therapeutic purposes are currently regulated by the US-FDA and Centre for Drug Evaluation and Research.

INDIAN PERSPECTIVE

In India, use of nicotine as an ingredient in any food item is prohibited under the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulation, 2011 of the Food Safety and Standards Act, 2006. Nicotine and nicotine sulphate are listed as hazardous chemicals under the Environment (Protection) Act, 1986 and in the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989. There are other laws and regulations whichare also applicable to ENDS.

The magnitude of potential short-term and long-term health risks to the users still remains undetermined at the population level since the products are recent and come in diverse forms. Whereas, the degree to which, if at all, the ENDS or e-cigarettes benefit as tobacco cessation aides is not firmly established, evidence suggests that there is a risk of dual use to some extent and initiation to tobacco addiction to non-smokers. Hence, on the balance these products have a net negative impact on public health. • Use of ENDS can open a gateway for new tobacco addiction which is a potential threat to the country’s tobacco control laws and on-going tobacco control programmes. • The rapidly increasing trend of use of ENDS or e-cigarettes by young persons, in countries where it was introduced, underscores a potential threat to public health that

mandates ‘prohibiting the manufacture and sale of sweets, snacks, toys or any other objects in the form of tobacco products which appeal to minors. This is also against the National Tobacco Control Law, i.e. COTPA Section 6, the smoke-free laws, COTPA Section 4 and COTPA Section 5, as it promotes and entices youth into initiating conventional cigarette smoking and is a threat to the on-going tobacco control programmes in the country.

CONCLUSIONS

E-cigarettes have the potential to benefit adults who smoke and who are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products.E-cigarettes are not safe for youth, young adults, pregnant adults, as well as adults who do not currently use tobacco products.While e-cigarettes have the potential to benefit some people and harm others, scientists still have a lot to learn about whether e-cigarettes are effective in helping adults quit smoking. If you’ve never smoked or used other tobacco products or e-cigarettes, don’t start.Basedon the currently available scientific and research data, the Council recommends complete prohibition on ENDS or e-cigarettes in India in the greater interest of protecting public health, in accordance with the precautionary principle of protecting the population from a noxious substance, after considering the following facts and circumstances. Additional research can help understand long-term health effects.Conclusions Based on the currently available scientific data from multiple streams of research, the Council recommends complete prohibition on ENDS or e-cigarettes in India in the greater interest of protecting public health, in accordance with the precautionary principle preventing public harm from a noxious agent, considering the following facts and circumstances: ENDS or e-cigarettes contain nicotine solution, which is highly addictive, and also other ingredients such as flavouring agents and vapourizer, rendering these products harmful for health. Uses of ENDS or e-cigarettes have documented adverse effects on humans which include DNA damage; carcinogenesis; cellular, molecular and immunological toxicity; respiratory, cardiovascular and neurological disorders and adverse impact on foetal development and pregnancy. The potential short-term and long-term health risks to the users still remain to be fully determined as the products are relatively recent and are marketed in diverse forms. Whereas, the degree to which, if at all, the ENDS or e-cigarettes benefit as tobacco cessation aides is not firmly established, evidence suggests that there is a risk of dual use to some extent and initiation to tobacco addiction to non-smokers. Hence, on the balance these products have a

net negative impact on public health. The marketing of ENDS can open the gateway to a new form of tobacco addiction, which is a potential threat to the country's tobacco control laws and ongoing tobacco control programmes. The documented trend of a rapid increase in the use of ENDS or e-cigarettes by young persons, in countries where it was introduced, portends a major potential threat to public health if the products are marketed in India. Increasing awareness among adolescents about the harms of e-cigarettes is urgently required through comprehensive tobacco-prevention programs. More research is needed to examine the role of flavours in increasing acceptability of e-cigarettes and how it affects perceived harmfulness of tobacco products

REFERENCES:

(Marques et al., 2021).

(Indian Council of Medical Research, 2019

World Health Abstract Purpose: Global Youth Tobacco Survey-4,