

# E-CIGARETTE USE AMONG UNIVERSITY STUDENTS IN DHAKA, BANGLADESH

## A REGULATORY OPPORTUNITY



### BACKGROUND

E-cigarette use among youth is becoming increasingly common. E-cigarettes are not harmless – they expose users to nicotine, a highly addictive substance that can harm adolescent brain development and negatively affects fetal development when used during pregnancy.<sup>1</sup> In addition, e-cigarettes contain at least 80 other harmful ingredients, including acetaldehyde (possible carcinogen), formaldehyde (known carcinogen), acrolein (toxin) and metals such as nickel, chromium and lead. The increasing popularity of e-cigarette use among youth threatens to create a new generation of young nicotine and tobacco users, as youth who use e-cigarettes are up to three times more likely to use tobacco products in the future.<sup>2,3</sup>

### PURPOSE OF RESEARCH

From January to February of 2020, Dhaka Ahsania Mission conducted three semi-structured focus group discussions with students who use e-cigarettes to understand their knowledge about e-cigarettes and how and why they use them.

### METHODOLOGY

A total of three focus group discussions (FGDs) were conducted with current e-cigarette user students (N=23) selected by using snowball sampling technique from one private university (North South University) and one public university (University of Dhaka) in Dhaka, Bangladesh. Students who were current university students and used e-cigarettes regularly in the past 30 days were eligible to participate. Two FGDs took place at North South University, one (n=6) with all males and the other (n=5) with all females. The third focus group (n=12) took place at the University of Dhaka, Bangladesh, with all-male participants. Each focus group discussion lasted approximately 90 minutes and was audio recorded then transcribed.

### STUDY FINDINGS

#### E-cigarette Awareness and Initiation

- Students first heard about e-cigarettes from social media, older siblings, friends, other family members, movies, shopping malls, or gift shops.
- Most students tried their first e-cigarette with friends.
  - **“To be honest...it was just one of my friends kind of telling me, ‘Oh, yeah, you can try this.’”** [male]
  - **“I only do it because my friends do it.”** [female]
- Most reported their first use of an e-cigarette to be very positive.
  - **“When I first tried it, I coughed a lot but it was fun.”** [female]
- When first trying an e-cigarette, most participants were not sure if it contained nicotine or not.

#### Advertisement of E-cigarettes

- Most participants reported seeing e-cigarette advertisements only on social media, particularly on Facebook and Instagram.

#### Reasons for Using E-cigarettes

- 15 out of 23 participants reported trying e-cigarettes because of the flavors.
  - Common flavors are strawberry, green apple, lemon, mango, cinnamon, mint, dessert, cotton candy, and chocolate.
  - **“The names are attractive, like Salt Nicotine, Tiger Blood.”** [male]
- Most participants reported using e-cigarettes to help them quit smoking conventional cigarettes.
  - Participants perceived e-cigarettes to be less harmful to health compared to conventional cigarettes.
- The ability to do smoke tricks was a common reason among male respondents.
  - **“Lots of people do smoke tricks and I wanted to try them.”** [male]
  - **“I thought it was cool. You get like big clouds out of these little pens that taste like cotton candy and stuff.”** [male]

#### Ownership of Devices and Sources of Acquisition

- Participants who own their own devices get them from several sources based on price and device preference:
  - Friends
  - Small markets near campus that sell them for a low price
  - Supermarket
  - Vape shops
  - Gift shops
  - E-commerce apps like *Daraz*
- Female participants were less likely to own their own devices, using a family member’s device instead.

## Types of E-cigarettes

- Open system (refillable tank)
  - Preferred by most participants because of e-liquid flavor variety and better for performing smoke tricks
  - **“Yeah, it’s a cool thing. It’s like you can have like one flavor in and then the next tank is a totally different flavor”**
- Closed system (disposable cartridges)
  - Participants specifically named *Juul*

## Knowledge of Health Harms of E-cigarette Use

- Participants were not aware of potential health harms
  - Most believed there is not enough scientific research about e-cigarettes causing health harms.
  - **“I’m only doing it now because apparently it’s perfectly safe.”** [male]
  - **“There’s no study saying that it’s bad for you... I enjoy it, so why stop if I know that there’s nothing that’s going to kill me? Now like if they’re like, ‘People who use the vaporizers for 5 years are going to die prematurely then I’ll probably quit it?’ ”** [male]
- Participants had mixed knowledge about nicotine.
  - Participants were unsure about nicotine differences between e-cigarettes and conventional cigarettes.
    - Some thought that e-cigarettes contain less nicotine than conventional cigarettes.
    - Some felt that nicotine in cigarettes is more “natural” and that e-liquid nicotine is “chemically engineered”
  - They were aware that nicotine is addictive
  - They were aware that e-cigarettes could contain nicotine and in different amounts.
- Participants who borrow a device to use e-cigarettes or depend on others to purchase e-liquids exercise little control over whether they use e-cigarettes with nicotine. They can either decide not to use the borrowed device if there is uncertainty about the product’s content and a desire to avoid nicotine.

## CONCLUSIONS

This small, exploratory study involving 23 focus group participants yielded findings that merit consideration for policymakers concerned about the presence of e-cigarettes in Bangladesh. Social media played a part in raising awareness among participants about these products and social media was a recognized means of advertising e-cigarettes. Although most participants reported trying e-cigarettes to quit smoking, it is worth noting that many participants reported that they started using because of the flavors, and, for males, because of a desire to do tricks when exhaling emissions.

Considering that e-cigarettes contain nicotine, a highly addictive chemical, and the finding that many participants use e-cigarettes in a social setting with friends, it is reasonable to question the degree to which quitting smoking remains a factor for continued use. Participants easily acquired e-cigarettes through a variety of channels but for female participants, sources were exclusively social, suggesting that there may be reasons (e.g., financial, cultural) for this difference between genders. Participants’ knowledge about e-cigarette content was limited. Their understanding of the health risks of e-cigarette use was deficient, or in some instances, even inaccurate, believing they pose no harm to health.

## RECOMMENDATION

The World Health Organization has asserted that e-cigarettes should be strictly regulated for maximum protection of public health.<sup>3</sup> In addition, given the engagement of the tobacco industry in producing e-cigarettes, policymakers should be mindful of the threat these products pose to tobacco control.

**In order to protect the health and safety of youth and future generations, Government should ban production, storage, advertisement, promotion, sponsorship, marketing, distribution, sale, import, export and use of E-cigarettes, heated tobacco products (HTPs), and other emerging tobacco products by incorporating such provisions in the Smoking and Tobacco Products Usage (Control) Act, 2005.**

1. U.S. Department of Health and Human Services (USDH-HS). How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking Attributable Disease (Executive Summary). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2010.
2. WHO Report on the Global Tobacco Epidemic, 2021: addressing new and emerging products. Geneva: World Health Organization; 2021.
3. Berry, KM, et al., “Association of Electronic Cigarette Use with Subsequent Initiation of Tobacco Cigarettes in US Youths,” *JAMA Network Open*, 2(2), published online February 1, 2019.