

## E-cigarette user compliance with COVID-19 health protocols in Yogyakarta

Eriyani Khuzaimah<sup>1</sup>, Retna Siwi Padmawati<sup>1</sup>, Bagas Suryo Bintoro<sup>1</sup>

### Abstract

**Purpose:** This study aims to explore the compliance of e-cigarette users during the COVID-19 pandemic. **Method:** This research is qualitative research with a phenomenological approach. Data were collected using in-depth interviews, semi-structured guidelines, and observation. The informants were selected using a snowball sampling approach, with a total of 10 e-cigarette users, two health promotion officers, and two e-cigarette shop employees. The validity of research data using triangulation and member checking. **Results:** The informants still need to fully comply with the policy on using e-cigarettes during the COVID-19 pandemic because the informants still lend each other e-cigarette devices and do not comply with health protocols when using e-cigarettes outdoors. Although this habit is still practiced, the informants are aware that this habit is risky, especially during a pandemic. The use of e-cigarettes during a pandemic can relieve boredom, boredom, and stress. Informants feel that there are different situations, such as community activities that are not running, and the income of e-cigarette sellers is decreasing. The way to access e-cigarettes is different from before the COVID-19 pandemic. **Conclusion:** E-cigarettes during the COVID-19 pandemic are dangerous, especially the habit of sharing e-cigarettes and gathering without establishing health protocols. However, e-cigarette users tend to ignore and stick to the habit.

**Keywords:** electronic cigarettes; COVID-19; Special Region of Yogyakarta

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<sup>1</sup>Department of Health Behavior, Environmental, and Social Medicine, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia

### \*Correspondence:

Eriyani Khuzaimah  
eriyanihuzaimah04@gmail.com

## INTRODUCTION

In 2015, Indonesia became the country with the highest number of smokers in Southeast Asia, with 65.19 million people [1]. Since 2011, 10.9 percent of Indonesia's population has become familiar with e-cigarettes [2]. The number of smokers in the Special

Region of Yogyakarta in 2018 increased to 25.80 percent [3]. Tobacco consumption during the COVID-19 pandemic increased by 15.2 percent [4].

The use of e-cigarettes also has risks like tobacco cigarettes. E-cigarettes contain nicotine and chemicals. The use of e-cigarette liquids, both *Electronic Nicotine Delivery Systems* (ENDS) and

*Electronic Non-Nicotine Delivery Systems* (ENNDS), can impact health and cause coughing, respiratory problems, lung disease, cardiovascular disease, and even addiction [5]. Using e-cigarettes during the COVID-19 pandemic also risks making users 14 times more likely to be infected with COVID-19 [6]. In addition, e-cigarette users will also experience more severe symptoms when compared to non-smokers [7]. Transmission of COVID-19 quickly occurs in e-cigarette users because of the habit of repeated hand-to-mouth and face-to-face touch that cigarette users often do [8].

Quarantine alone is not enough to prevent the spread of the COVID-19 virus [9]. Special Region of Yogyakarta has implemented new habit adaptations since 2020 to remain productive and safe during the COVID-19 pandemic [10]. Some things are restricted during PSBB, including school and work activities, religious activities, activities in public facilities, social activities, and culture, as well as public transport operations [11]. People are asked to stay home and only go out if it is urgent to new habits. Then, if they are going to travel, the public is invited to continue to comply with health protocols, such as using masks properly, avoiding touching the eyes, nose, and mouth, maintaining distance, and washing hands with soap [10]. The purpose of this research is to find out about the experience of using e-cigarettes during the COVID-19 pandemic in the area of Yogyakarta.

## METHODS

This research is qualitative research using a phenomenological approach. Research data was collected through in-depth interviews using semi-structured guidelines and observations. Informants were selected using a snowball sampling approach, with inclusion criteria, namely male and female users of e-cigarettes aged 18-40 years. They had used e-cigarettes one month before the COVID-19 pandemic in Indonesia. Then the exclusion criteria in this study are informants who have not used e-cigarettes in the past month.

The research informants totaled 14 informants. The informants included 10 users of e-cigarettes, 2 health promotion officers, and 2 employees of an e-cigarette shop. The validity of the research data was carried out using source triangulation and member checking. This research was conducted from June 2021 to August 2021. The location of the study was carried out by focusing on Yogyakarta City and Bantul Regency because these two areas are urban and rural areas in DIY.

## RESULTS

### Background on the use of e-cigarettes

Internal and external factors influence the use of e-cigarettes. Internal factors that influence the use of e-cigarettes are due to a history of using tobacco cigarettes before using e-cigarettes. Most of the informants asked if they had a history of using tobacco cigarettes. In addition, the informants said that e-cigarettes are something new, so they are curious and want to try them.

*"...the old days (e-cigarettes) were more of a novelty"* (D, 31 yo, male, employee)

*"...I tried to have my friend because there was smoke. So I was curious and kept buying, it turned out to be delicious"* (AN, 22-yo, male, self-employed)

External factors that influence the use of e-cigarettes are the family environment, gardening environment, and easy access to e-cigarettes. The family did not forbid the informant to use e-cigarettes because they judged that the informant was an adult. Informants also have a friendly environment for the e-cigarette community. The way to access e-cigarettes during the COVID-19 pandemic has changed because the informants prefer to come directly to the store.

*"... in my opinion (purchasing) online is not satisfied, if you come directly we can ask questions, if via chat you are not satisfied, it's good right away"* (Y, 23-yo, male, student)

### Compliance of e-cigarette users with policies during the COVID-19 pandemic

The informant said that he only uses e-cigarettes outside the house. The results of observations made in public places in Yogyakarta City and Bantul Regency during the COVID-19 pandemic show that e-cigarette users take advantage of outdoor facilities to smoke. However, e-cigarette users do not keep their distance and do not wear masks. The informant said that if they still lend each other electronic cigarettes, they share e-cigarette liquids with their closest friends. The informant also has had a habit of smoking in e-cigarette shops since before the pandemic, but this habit was stopped at the beginning.

*"...in gathering places too often, but maybe I choose an outdoor place"* (Y, 23 yo male, student)

*"Join. If a friend has this one, one has this, one has this, then try one by one to find out" (SR, 20-yo female, employee)*

### **Perceptions of the risks of using e-cigarettes**

The informant assessed that lending electronic cigarettes was a risky habit because it could transmit disease. However, this habit was still carried out even though there was a COVID-19 pandemic at that time. Since the pandemic, informants have become increasingly vigilant by not lending e-cigarette devices to sick friends. Informants only lend e-cigarette devices to friends they know and clean the device using a tissue when they are finished borrowing.

*"The risk may be if (electronic cigarette devices) are made together. not cleaned, not wiped, not taken care of" (SR, 20-yo, female, employee)*

*"...if coughing from saliva can be exposed, what about during the Corona season like this" (R, 27-yo, man, employee)*

*"...sometimes the stamp is removed, cleaned first, washed. In the electric cigarette shop X, there is even a washing machine" (D, 31-yo, male, employee)*

### **Perceptions of the benefits of using e-cigarettes**

Informants also assessed that the use of e-cigarettes had benefits. Before the COVID-19 pandemic, e-cigarettes were considered useful because they were economical, could make more friends, did not cause hunger, and were an alternative to quitting tobacco cigarettes. During the pandemic, e-cigarettes were considered to relieve boredom and stress.

*"The benefits are just filling my boredom... yes, filling my boredom" (F, 26-yo, woman, influencer)*

*"In my opinion, getting rid of the peat is like that, sis. So... I also vape when I'm stressed, so i'm be calmer" (AN, 22-yo male, self-employed)*

### **The difference felt before and during the COVID-19 pandemic**

Before the pandemic, there were many events, such as the absence of a smoking community event, which is usually held every year. E-cigarette employees also said there had been a decline in income during the pandemic. This made employees offer promos and discounts to attract consumers. The

electric shop also added facilities such as a handwashing area in front. E-cigarette products are easily accessed online during the COVID-19 pandemic. Consumers also buy more than one liquid so they stay supplied with liquid stock during the pandemic.

*"...before the pandemic, almost once a month there must have been an event, like an expo, right, Jogja has a center, a center is an event once a year, the name is INVEX Indonesia Vape Expo" (R, 27-yo, male, employee)*

*"...there must be (a difference in turnover). Even, according to the circumstances. It used to be quiet during the first pandemic, but now thank God it's back to normal" (E, 20 yo, shop employee)*

*"... always buy two (liquids), because they get bored quickly, do not bother if they run out" (SC, 26-yo female, student)*

## **DISCUSSION**

According to the *Protection Motivation Theory*, a person's use of e-cigarettes is influenced by internal and external factors. When faced with a threat, there will be a cognitive assessment related to the threat that affects a person's healthy or unhealthy behavior [12]. E-cigarettes have a unique taste that is different from tobacco cigarettes. It makes smokers curious and want to try. In 2014, there were 7,764 types of liquid flavors [13]. In addition, parenting in a family [14] and a friend [15] has a significant effect on increasing the use of e-cigarettes.

E-cigarette users indoors can harm others because they can leave aerosols from e-cigarette vapors (flouris13). The use of e-cigarettes during the COVID-19 pandemic also has risks, such as the habit of lending e-cigarettes, which can cause various diseases such as influenza [16]. Devices that are not cleaned can be a medium of disease exchange [17]. However, not a few smokers think that e-cigarettes can relieve boredom [18], relieve boredom and stress during the pandemic [19]. The COVID-19 pandemic has reduced the income of e-cigarette traders [20]. However, e-cigarette traders use sales strategies in other ways, such as through social media [21] and discounted prices (peace) to attract customers.

Now, access to e-cigarette products is relatively easy because since e-cigarettes are in great demand and their use is increasing exponentially, the availability of e-cigarettes is growing in various countries (gravely). Easy access to tobacco products

shows that the regulation of Government Regulation of the Republic of Indonesia Number 109 on product security of tobacco products is need to be stronger and requires action on these regulations. Regulations on tobacco products must be updated, considering that tobacco producers continue to innovate to be able to market their products [20]. Regulations that need to be updated prevent health services from taking more massive action in dealing with tobacco control issues. Cooperation from various parties is needed to realize tobacco regulation. Policies regarding health protocols must also be more emphasized, considering the threat of the Omicron pandemic in Indonesia if health protocols tend to be ignored.

## CONCLUSION

Internal and external factors influence the use of e-cigarettes. These two factors shaped the behavior of e-cigarette users toward policies during the COVID-19 pandemic. Electric users still lend electrical devices to their friends and congregate in crowds during the COVID-19 pandemic. E-cigarette users have yet to fully comply with health protocols even though they are aware of these risks.

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