

Supplementary file:

Survey items (English translation)

A. Sociodemographic characteristics

Items	Response options
Sex	Male Female
Age group	19-29 30-39 40-49 50-59 60-69
Current region of residence	Seoul Busan Daegu Incheon Gwangju Daejeon Ulsan Gyeonggi Gangwon Chungbuk Chungnam Jeonbuk Jeonnam

	Gyeongbuk Gyeongnam Jeju Sejong
Highest level of education completed.	Middle school graduate High school graduate College graduate Graduate school or higher
Average monthly income (KRW)	≤ 1,000,000 KRW 1,000,001–3,000,000 KRW 3,000,001–5,000,000 KRW 5,000,001–7,000,000 KRW ≥ 7,000,000 KRW

B. E-cigarette use, EC-related perceptions and behaviors

Items	Response options
Have you ever used liquid-based e-cigarettes, or do you currently use them?	Daily Occasionally Used in the past (former use) Never used
In the past 12 months, have you ever stopped using liquid-based e-cigarettes for at least one day (24 hours) in an attempt to quit?	Yes No
Have you ever been curious about liquid-based e-cigarettes?	Very much Somewhat

	<p>Neutral</p> <p>Not really</p> <p>Not at all</p>
<p>Compared with combustible cigarettes (regular cigarettes), how harmful to health do you think liquid-based e-cigarettes are?</p>	<p>Much more harmful</p> <p>Somewhat more harmful</p> <p>About the same</p> <p>Somewhat less harmful</p> <p>Much less harmful</p>

C. Marketing exposure and engagement (in past 30 days)

Items	Response options
<p>In the past 30 days, where have you seen advertisements for EC devices or e-liquids?</p>	<p>I have not seen any advertisements in the past 30 days</p> <p>Convenience store or other retail outlets</p> <p>Social media (e.g., Facebook, Instagram, X)</p> <p>Newspapers or magazines</p> <p>TV</p> <p>Fairs/exhibitions, festivals, sports events, etc.</p> <p>Clubs, internet cafés (PC rooms), restaurants, or cafés</p> <p>Email messages</p> <p>Outdoors/on the street</p> <p>Other online websites</p>

	Messaging apps (e.g., KakaoTalk open chat) Other (please specify): _____
In the past 30 days, how often have you seen posts related to EC devices or e-liquids on social media?	Several times a day About once a day Several times a week About once a week Less than three times a month
What actions did you take regarding EC contents seen on social media in the past 30 days? (Select all that apply.)	I clicked “Like.” I left a comment I clicked to view more details I did nothing

Note: The survey was administered in Korean. The items above are an English translation of the questionnaire content used in this study. EC refers to liquid-based electronic cigarettes (vapes), and CC refers to combustible cigarettes.

Screening and skip patterns: Items on exposure frequency and engagement were administered only to respondents who reported any EC-related marketing exposure on social media in the past 30 days; respondents who did not report any EC-related marketing exposure on social media in the past 30 days—including those exposed only through other channels—were classified as ‘No Exposure’ for the social-media-specific exposure–engagement variable.