

Title: A 2025 Update on E-cigarette Use in Ireland: prevalence, relationship with smoking, motivations, and constituents

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Background

We have reported previously on the significant increase in teenager e-cigarette use in Ireland between 2014 and 2019¹, particularly in the context of the halt in the decline in smoking². In 2019, prevalence of ever e-cigarette use was 37% and current e-cigarette use was 17.3% while ever-smoking was 30.4% and current smoking 13.6%³.

Objectives

This study aims to provide an update on:

- trends between 2019 and 2024 in prevalence of teenagers' e-cigarette use and smoking; and also examines:
 - their relationship with tobacco when first using e-cigarettes; and
 - their motivations for e-cigarette use;
 - what they say are constituents of e-cigarettes they use.

Methods

Our 2024 sample (n=5,045) comprised a nationally representative, stratified random school sample of 15- to 18-year-olds from 268 classes. Data were collected online. Our comparator 2019 sample comprised (n=3,495) 15-18 year olds collected in pen and paper survey. Both samples used ESPAD (European School Survey Project on Alcohol and other Drugs) questionnaires and protocols. Analyses were performed using SPSS v29.

Results

Ever and current (past 30-day) use of e-cigarettes increased in 2024 from 2019, being 39% (n=1,964) and 20.2% (n=1,016) respectively in 2024 compared with 37% and 17.3% in 2019. Prevalence of ever-smoking was similar for 2024 (31.1%) and 2019 (31.3%). Prevalence of current smoking was higher in 2024 (14.1%) than in 2019 (13.7%). At first use of e-cigarettes, only 4.4% were regular smokers and 67.7% had never used traditional cigarettes. Asked why they tried e-cigarettes, 58.5% said out of curiosity, 47.5% because they were offered by friends, and 1.7% to stop smoking. A minority of current users reported that their e-cigarettes contained cannabinoids (THC 9.5%, CBD 3.2%).

Conclusions

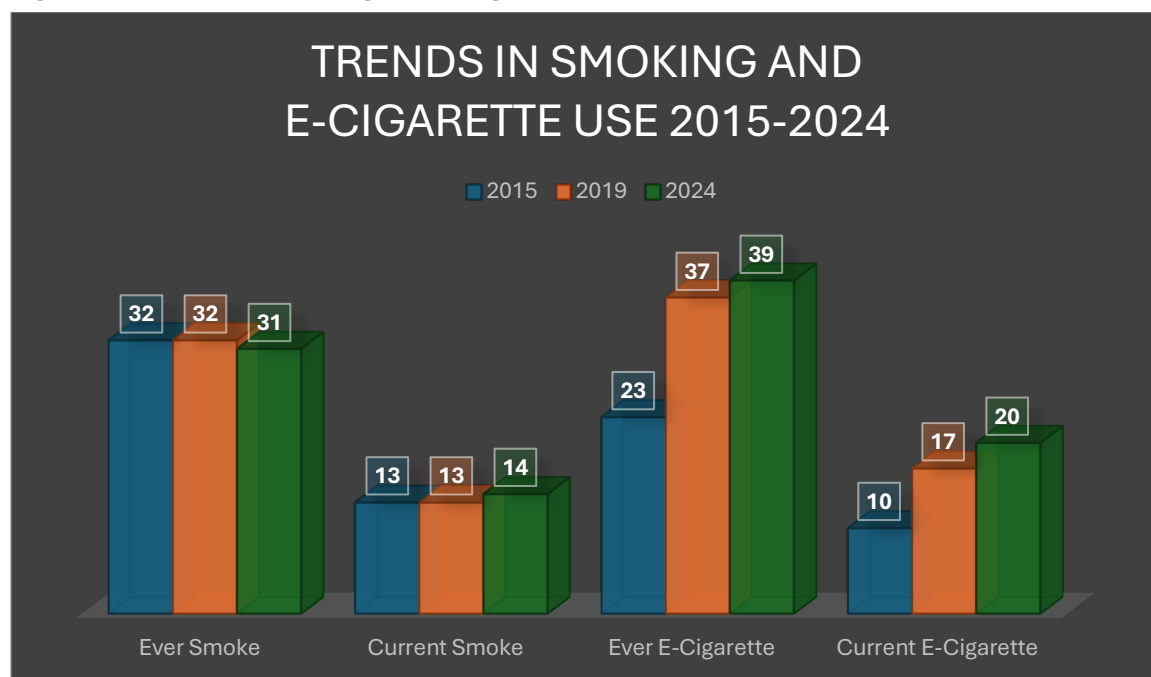
Increasing prevalence of e-cigarette use continues, albeit at a slower rate than previously reported. The halt in the decline in smoking previously reported persists. Smoking cessation was scarcely reported as a reason for trying e-cigarettes. Fewer than one in twenty were regular smokers when they first tried e-cigarettes, a further decline on previous figures reported (8.9% 2019, 15.7% 2015). E-cigarettes are also a vector for cannabinoid use, helping to explain the strong association found between adolescent e-cigarette use and subsequent cannabis use⁴. Therefore, and notwithstanding concerns about increased prevalence of other nicotine products, e-cigarettes remain a public health threat to teenagers.

References

1. J Hanafin S Sunday L Clancy (2022). E-cigarettes in Ireland – prevalence, motivations, and relationship with tobacco. *European Respiratory Journal* 60(suppl 66): 2073; DOI: <https://doi.org/10.1183/13993003.congress-2022.2073>
2. S Sunday J Hanafin L Clancy (2021). Increased smoking and e-cigarette use among Irish teenagers: a new threat to Tobacco Free Ireland 2025. *ERJ Open Research* 7(4): 00438-2021; DOI: <https://doi.org/10.1183/23120541.00438-2021>
3. J Hanafin S Sunday L Clancy (2023). E-cigarettes and smoking in Irish teens: a logistic regression analysis of current (past 30-day) use of e-cigarettes. *Journal of Public Health*, 31(6), pp.955-966; DOI: <https://doi.org/10.1007/s10389-021-01610-1>
4. Sun R, Mendez D, Warner KE. Use of Electronic Cigarettes Among Cannabis-Naive Adolescents and Its Association With Future Cannabis Use. *JAMA Netw Open*. 2022;5(7):e2223277. DOI: [doi:10.1001/jamanetworkopen.2022.23277](https://doi.org/10.1001/jamanetworkopen.2022.23277)

Tables and Figures

Figure 1: Trends in Smoking and E-Cigarette Use



Prevalence of Ever and Current E-Cigarette Use

E-cigarette use, p=0.11	Total N (%)	Male N (%)	Female N (%)	Rather not say N (%)

Never	3164 (60.7)	1613 (62.3)	1495 (59.4)	56 (56.0)
Ever	2045 (39.3)	978 (37.7)	1023 (40.6)	44 (44.0)
Current (last 30 days)	1069 (20.5)	503 (19.4)	539 (21.4)	27 (27.0)
Last 12 months	588 (11.3)	273 (10.5)	304 (12.1)	11 (11.0)
More than 12 months	388 (7.4)	202 (7.8)	180 (7.1)	6 (6.0)
Total	5209 (100.0)	2591 (49.7)	2518 (48.3)	100 (1.9)

Table 1: Prevalence of E-Cigarette Use by Gender

Prevalence of Ever and Current Smoking 2024

Occasions Smoked, p=0.04	Total N (%)	Male N (%)	Female N (%)	Rather not say N (%)
None	3640 (68.9)	1819 (69.3)	1764 (68.9)	57 (57.0)
<i>Ever smoked</i>	1646 (31.1)	807 (30.7)	796 (31.1)	43 (43.0)
Last 30 days	746 (14.1)	351 (13.4)	370 (14.5)	25 (25.0)
Last 12 months	564 (10.7)	285 (10.9)	266 (10.4)	13 (13.0)
More than 12 months	336 (6.4)	171 (6.5)	160 (6.3)	5 (5.0)
Total	5286 (100.0)	2626 (49.7)	2560 (48.4)	100 (1.9)

Table 2: Smoking Prevalence by Gender

Relationship with Traditional Cigarettes at First Use of E-Cigarettes

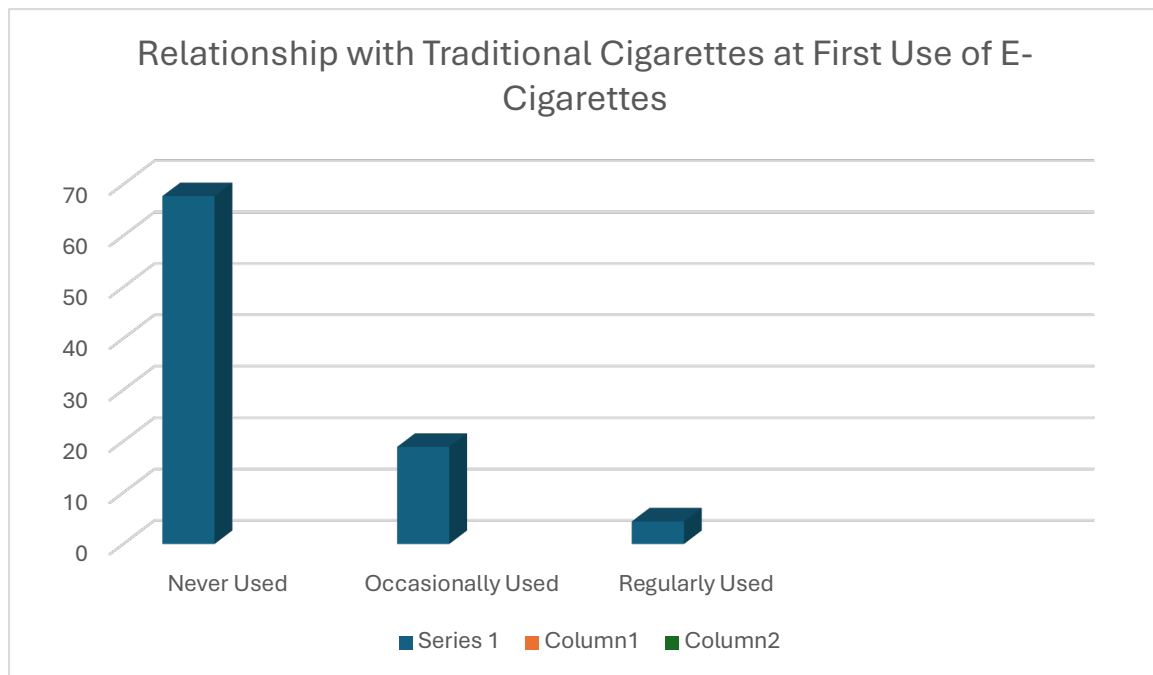
(When you first tried e-cigarettes (if ever), what was your relationship with traditional cigarettes?)

Relationship with Traditional Cigarettes, p<0.001	Total N (%)	Male N (%)	Female N (%)	Rather not say N (%)
Never tried e-cigarettes ¹	182 (9.0)	97 (53.3)	81 (44.5)	4 (2.2)
Never used traditional cigarettes	1373 (67.7)	667 (48.6)	686 (50.0)	20 (1.5)
Occasionally used traditional cigarettes	387 (18.9)	166 (43.2)	211 (54.9)	7 (1.8)
Regularly using traditional cigarettes	90 (4.4)	42 (46.7)	36 (40.0)	12 (13.3)
Total	2029 (100.0)	972 (47.9)	1014 (50.0)	43 (2.1)

Table 3: Relationship with Traditional Cigarettes at First Use of E-Cigarettes

¹ Of those who had used e-cigarettes

Figure 2: Relationship with Traditional Cigarettes at First Use of E-Cigarettes



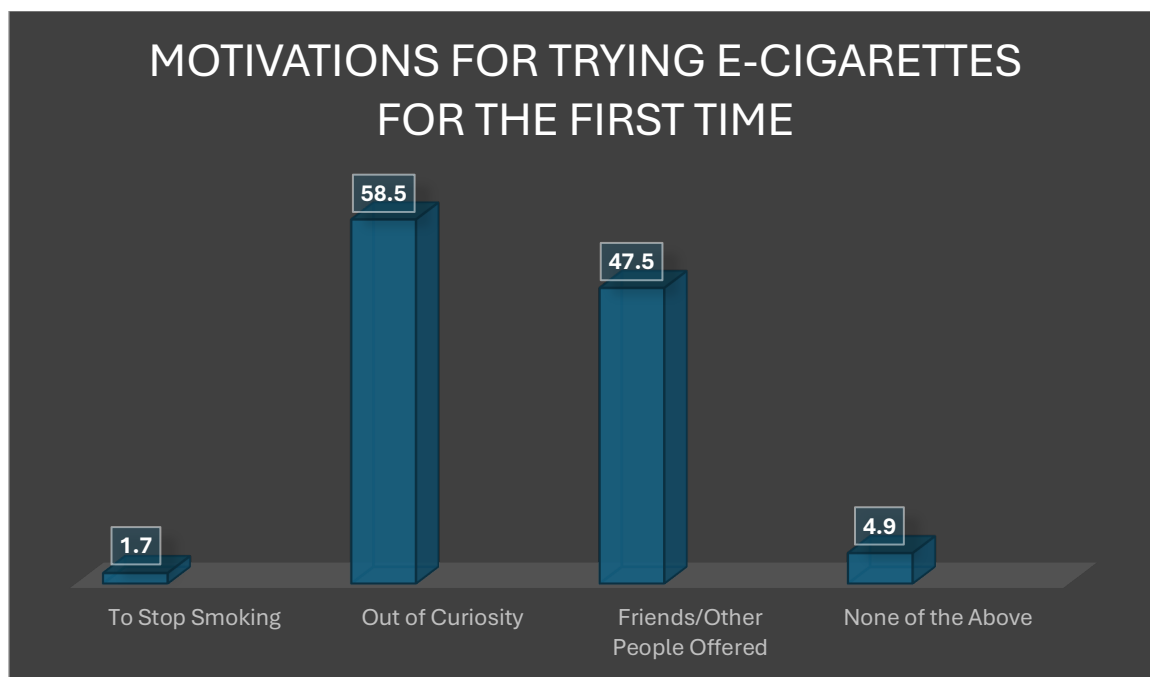
Motivations for Trying E-Cigarettes

(Why did you try e-cigarettes for the first time?)

Reasons for trying e-cigarettes	Total	Male	Female	Rather not answer	p Value
To stop smoking cigarettes					
No	2011 (98.3)	961 (98.3)	1007 (98.4)	43 (97.7)	0.91
Yes	34 (1.7)	17 (1.7)	16 (1.6)	1 (2.3)	
Out of Curiosity					
No	849 (41.5)	370 (37.8)	459 (44.9)	20 (45.5)	0.97
Yes	1196 (58.5)	608 (62.2)	564 (55.1)	24 (54.5)	
Friends/other people offered					
No	1073 (52.5)	548 (56.0)	495 (48.4)	30 (68.2)	0.29
Yes	972 (47.5)	430 (44.0)	528 (51.6)	14 (31.8)	
None of the above					
No	1944 (95.1)	939 (96.0)	970 (94.8)	35 (79.5)	0.62
Yes	101 (4.9)	39 (4.0)	53 (5.2)	9 (20.5)	

Table 4: Reported Reasons for trying E-Cigarettes

Figure 3: Motivations for Trying E-Cigarettes for the First Time



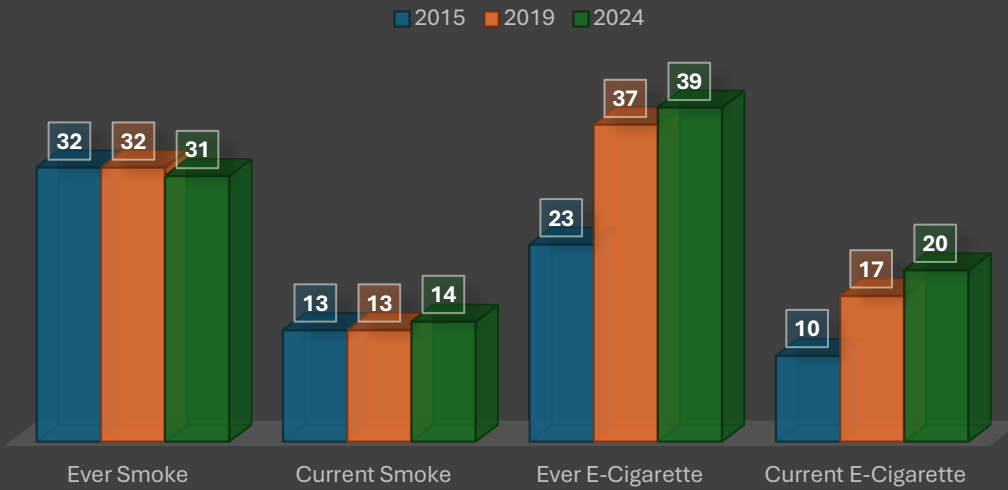
Content of E-Cigarettes reported by Current Users

(If you have used e-cigarettes during the LAST 30 DAYS, what did they contain?)

E-cigarette Content	Total N (%)	Male N (%)	Female N (%)	Rather not say N (%)	p value
Nicotine					
No	1035 (50.6)	507 (51.8)	507 (49.6)	21 (47.7)	0.55
Yes	1010 (49.4)	471 (48.2)	516 (50.4)	23 (52.3)	
Flavoring					
No	1202 (58.8)	616 (63.0)	565 (55.2)	21 (47.7)	<0.001
Yes	843 (41.2)	362 (37.0)	458 (44.8)	23 (52.3)	
CBD					
No	1979 (96.8)	941 (96.2)	1005 (98.2)	33 (75.0)	<0.001
Yes	66 (3.2)	37 (3.8)	18 (1.8)	11 (25.0)	
THC					
No	1850 (90.5)	862 (88.1)	958 (93.6)	30 (68.2)	<0.001
Yes	195 (9.5)	116 (11.9)	65 (6.4)	14 (31.8)	
Don't know					
No	1911 (93.4)	913 (93.4)	959 (93.7)	39 (88.6)	0.40
Yes	134 (6.6)	65 (6.6)	64 (6.3)	5 (11.4)	

Table 5: Content of E-Cigarettes reported by Current E-Cigarette Users

TRENDS IN SMOKING AND E-CIGARETTE USE 2015-2024



TRENDS IN SMOKING AND E-CIGARETTE USE 2015-2024

