

Gender differences in teenage e-cigarette prevalence and predictive variables



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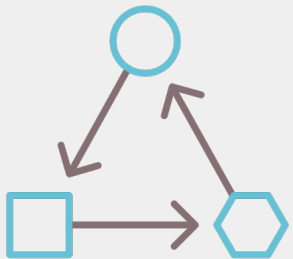
BACKGROUND

- ❑ E-cigarette *ever-use* and *current-use* among teenagers has been increasing worldwide, including in Ireland. Worldwide, boys are observed to have higher prevalence compared with girls.
- ❑ We set out to identify trends in e-cigarette ever-use and current use in Ireland between 2015 and 2019, focusing on gender differences.



Methods

Data drawn from two Irish waves of the European School Survey Project on Alcohol and other Drugs (ESPAD) yielded a total valid sample of 3,421 16-year-olds from a stratified random sample of schools (n=50), comprising 1,472 students (born 1999) in 2015, and 1,949 students (born 2003) in 2019.



Trends in e-cigarette use were examined using a multivariable logistic regression model with e-cigarette ever-use and current-use as dependent variables.

RESULTS

E-cigarette use (2015 vs 2019)

- ❑ *Ever-use* increased from 23% to 39%
- ❑ *Current-use* increased from 10% to 18%
- ❑ The rate of increase was significantly greater for girls AOR 2.67 (CI:2.02, 3.54) vs 2.04 (CI:1.55, 2.68)

Peer smoking

- ❑ Peer smoking was significantly associated with *e-cigarette ever- and current-use*
- ❑ The association was particularly strong for boys if “Most/All friends smoke”:

Ever-use AOR 7.07 (CI:4.33,11.55) for boys vs AOR 6.23 (CI:3.87,10.02) for girls;

Current use AOR 5.90 (CI:3.31,10.52) for boys vs 5.31 (CI:3.01,9.37) for girls.

Parental monitoring

- ❑ Less parental monitoring was associated with greater e-cigarette use, more so for boys:

Ever-use AOR 5.42 (CI:2.72,10.79) for boys vs AOR 3.33 (CI:1.84,6.03) for girls;

Current use AOR 5.50 (CI:2.85,10.61) for boys vs AOR 3.50 (CI:1.79, 6.84) for girls.



	E-cigarettes ever-use (16-year-olds)		
	Total (AOR, 95% CI)	Male (AOR, 95% CI)	Female (AOR, 95% CI)
<i>ESPAD Year</i>			
2015	1	1	1
2019	2.29 (1.89, 2.78)	2.04 (1.55, 2.68)	2.67 (2.02, 3.54)
<i>Ever smoked</i>			
Never	1	1	1
Ever	1.39 (1.10, 1.75)	1.23 (0.89, 1.71)	1.56 (1.12, 2.18)
<i>Current smoking</i>			
No	1	1	1
Yes	1.76 (1.31, 2.38)	2.60 (1.71, 3.93)	1.14 (0.73, 1.79)
<i>Household composition</i>			
Single parent	1	1	1
Two parents	0.84 (0.66, 1.08)	0.91 (0.63, 1.30)	0.80 (0.55, 1.15)
Blended families	1.43 (0.93, 2.16)	1.85 (1.02, 3.35)	1.14 (0.61, 2.13)
<i>Parental Monitoring</i>			
Know always	1	1	1
Know quite often	1.99 (1.61, 2.46)	1.94 (1.43, 2.62)	2.04 (1.51, 2.75)
Know sometimes	3.12 (2.52, 4.63)	3.15 (2.06, 4.83)	3.68 (2.35, 5.75)
Usually don't know	3.96 (2.54, 6.18)	5.42 (2.72, 10.79)	3.33 (1.84, 6.03)
<i>Peer smoking</i>			
None	1	1	1
A few/some	2.74 (2.17, 3.45)	3.12 (2.22, 4.38)	2.47 (1.79, 3.41)
Most/all	6.52 (4.66, 9.15)	7.07 (4.33, 11.55)	6.23 (3.87, 10.02)

Table 2: Multivariable logistic regression results of factors associated with e-cigarette current use in the 2015 & 2019 ESPAD Surveys

Other variables included in the final model but not significant include ever smoked, household composition, truancy and perceived wealth

Table 1: Multivariable logistic regression results of factors associated with e-cigarette ever-use in the 2015 & 2019 ESPAD Survey

Other variables included in the final model but not significant include household composition, truancy, perceived wealth and relationship with mother

	E-cigarettes current use (16-year-olds)		
	Total (AOR, 95% CI)	Male (AOR, 95% CI)	Female (AOR, 95% CI)
<i>ESPAD Year</i>			
2015	1	1	1
2019	2.41 (1.85, 3.12)	1.96 (1.37, 2.82)	3.11 (2.10, 4.61)
<i>Current smoking</i>			
No	1	1	1
Yes	1.78 (1.23, 2.55)	2.13 (1.30, 3.51)	1.50 (0.87, 2.59)
<i>Parental Monitoring</i>			
Know always	1	1	1
Know quite often	2.22 (1.69, 2.92)	2.62 (1.76, 3.90)	1.90 (1.29, 2.81)
Know sometimes	3.53 (2.49, 5.01)	4.06 (2.49, 6.63)	3.09 (1.85, 5.15)
Usually don't know	4.48 (2.83, 7.11)	5.50 (2.85, 10.61)	3.50 (1.79, 6.84)
<i>Peer smoking</i>			
None	1	1	1
A few/some	2.13 (1.54, 2.96)	2.23 (1.39, 3.59)	2.11 (1.34, 3.33)
Most/all	5.45 (3.65, 8.14)	5.90 (3.31, 10.52)	5.31 (3.01, 9.37)
<i>Relationship with mother</i>			
Satisfied	1	1	1
Neither nor	1.23 (0.77, 1.97)	1.37 (0.68, 2.79)	1.25 (0.66, 2.37)
Not satisfied	1.55 (1.06, 2.26)	1.40 (0.79, 2.49)	1.64 (0.98, 2.74)

**Bold numbers indicate statistical significance at <.05.*

Conclusion

Marked increase in prevalence of e-cigarette ever- and current use 2015-2019

Prevalence higher in boys but increasing at a faster rate in girls

Having peers who smoked and having less parental monitoring are significant risk factors

These independent variables operate differently for girls and boys, providing potential novel mechanisms for interventions to prevent an increasing risk of nicotine addiction



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Source: ESPAD 2019 Ireland: Results from the European Schools Project on Alcohol and Other Drugs in Ireland. S Sunday, S Keogan, J Hanafin, L Clancy. Dublin: TFRI. 2020. ISBN: 978-0-9557528-4-1



Thank you for listening. Any questions?

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