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# FACTORS ASSOCIATED WITH E-CIGARETTE USE IN YOUNG ADULTS

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**Salome Sunday, Luke Clancy, Joan Hanafin**

TobaccoFree Research Institute Ireland, [www.tri.ie](http://www.tri.ie)

FOCAS Research Institute TU Dublin

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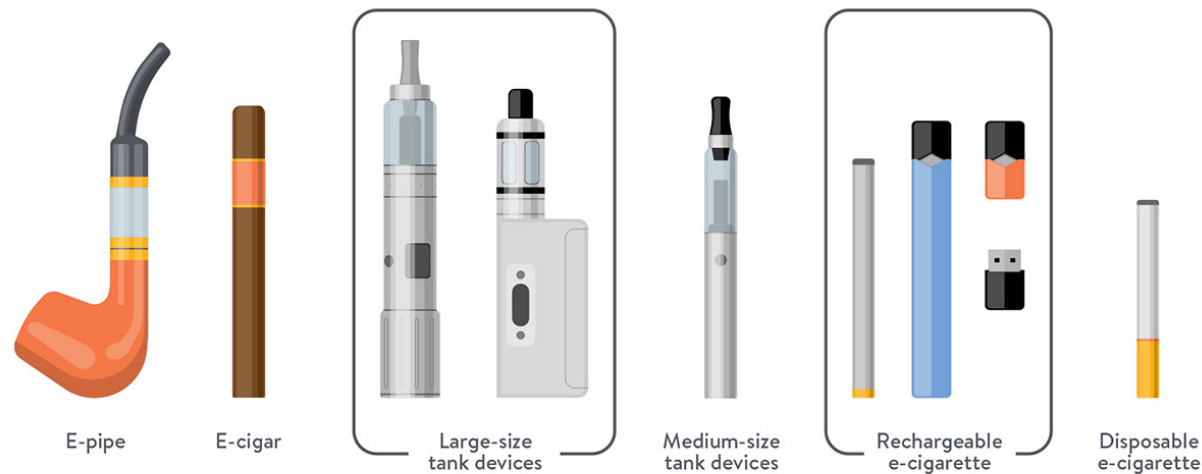
Kildare, Ireland

1-3 December 2022

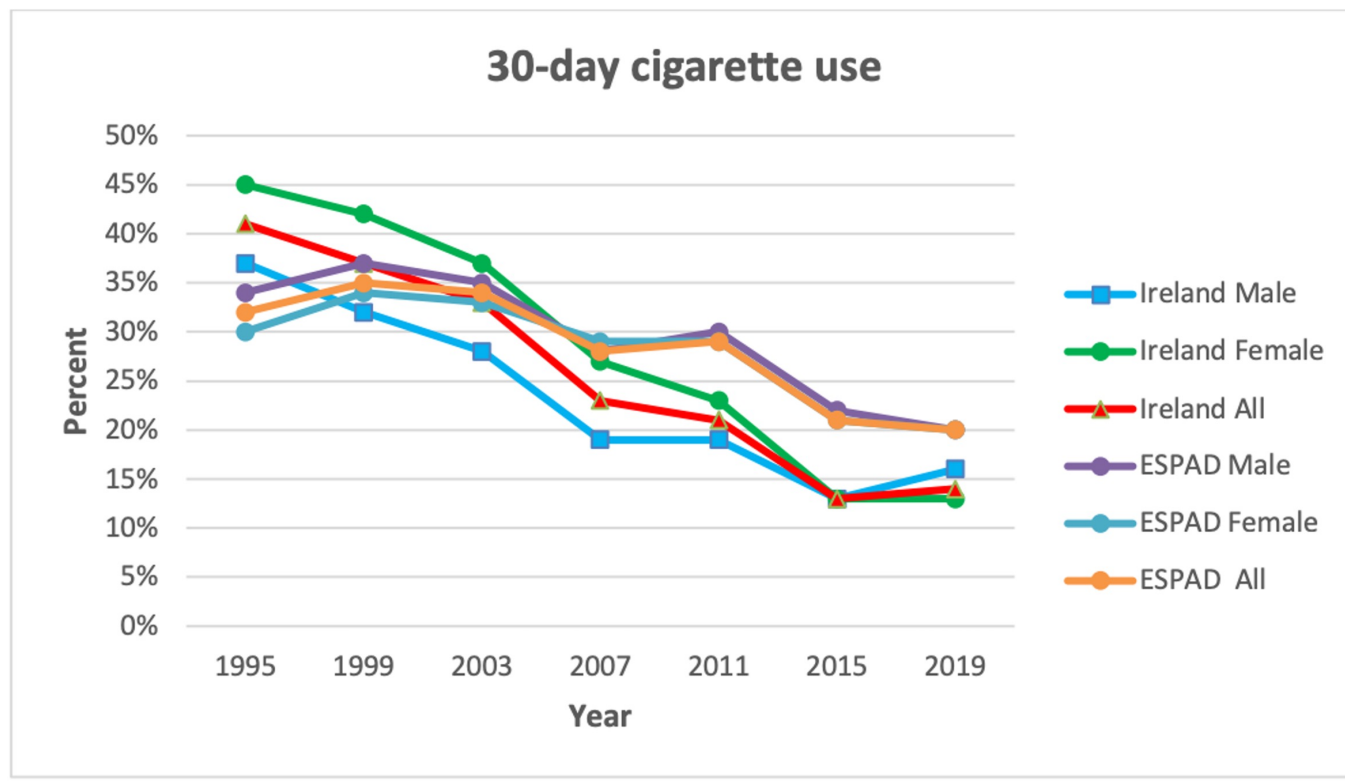


# BACKGROUND

- E-cigarettes are battery-operated devices that produce aerosol when a liquid solution which may contain flavoring, nicotine, and other chemicals is heated<sup>1</sup>
- Since their introduction to the the global market around 2007 and in Ireland in 2013, e-cigarettes have rapidly become popular among adolescents<sup>2</sup> and young adults<sup>1</sup>
- E-cigarette use is associated with multiple adverse health consequences such as, nicotine addiction, obstructive lung disease from flavourants in e-cigarettes and profound changes in the brain<sup>3</sup>
- A main concern: potential for e-cigarette use to renormalize cigarette smoking, especially in young people<sup>4</sup>



# HALT IN THE DECLINE IN TEENAGE SMOKING IN IRELAND



Male teenage smoking in Ireland rose to **16%** in 2019

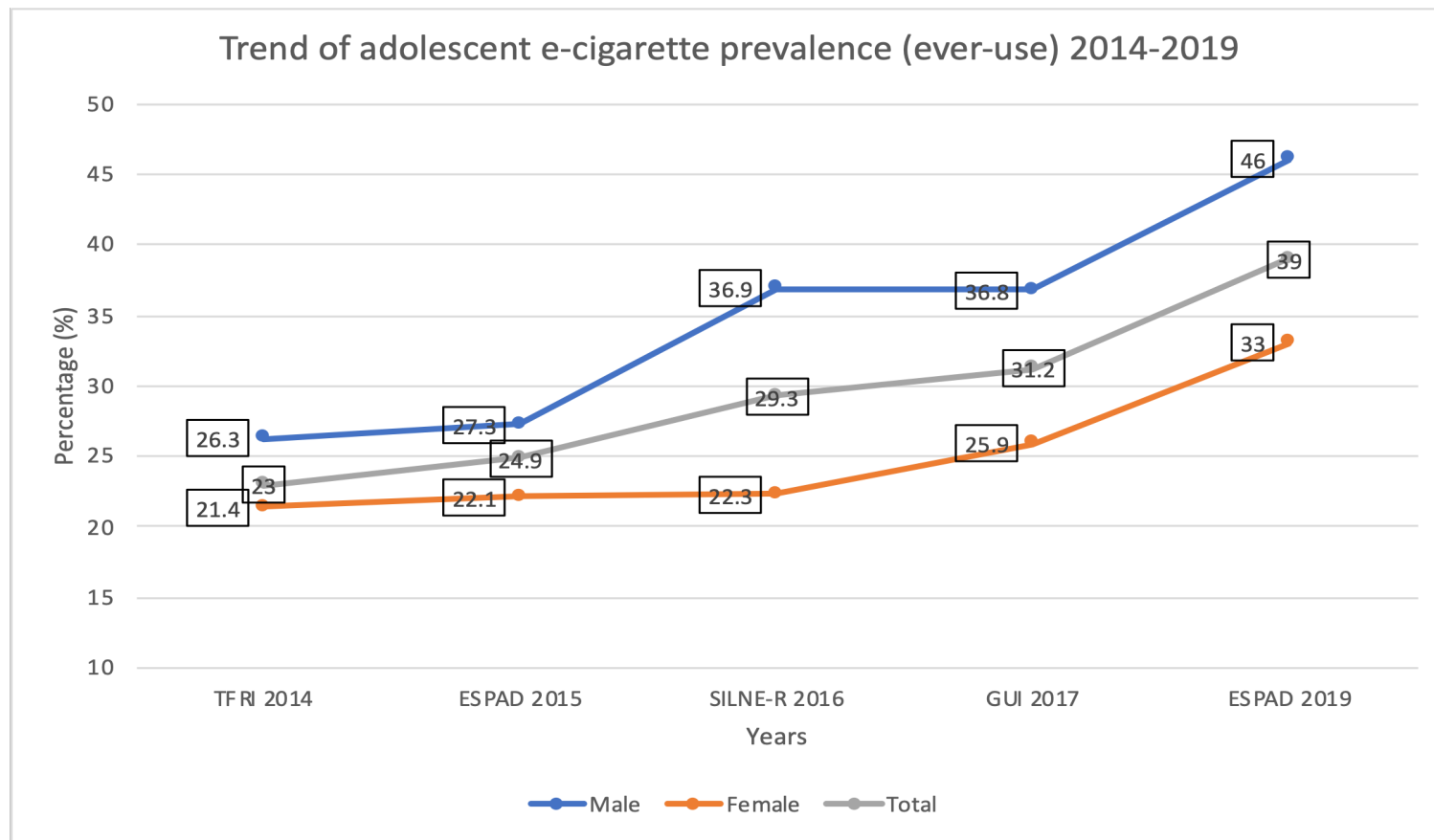
**European Schools Project on Alcohol & other Drugs**

**ESPAD 2019 IRELAND**

TobaccoFree Research Institute Ireland for the Department of Health

Salome Sunday, Sheila Keogan, Joan Hanafin, Luke Clancy

# MARKED RISE IN ADOLESCENT E-CIGARETTE USE



The increase in e-cigarette use among young people represents a growing concern for tobacco control efforts in Ireland.



Tobacco Endgame in Ireland

< 5% smoking prevalence

# PREVIOUS RESEARCH

Research | [Open Access](#) | [Published: 03 November 2021](#)

## Friends and family matter Most: a trend analysis of increasing e-cigarette use among Irish teenagers and socio-demographic, personal, peer and familial associations

[Joan Hanafin](#), [Salome Sunday](#) & [Luke Clancy](#) 

*BMC Public Health* **21**, Article number: 1988 (2021) | [Cite this article](#)

1935 Accesses | 4 Citations | 8 Altmetric | [Metrics](#)

## Increased smoking and e-cigarette use among Irish teenagers: A new threat to Tobacco Free Ireland 2025

Salome Sunday, Joan Hanafin, Luke Clancy

Research Paper

Tobacco Induced Diseases

## Sociodemographic, personal, peer, and familial predictors of e-cigarette ever use in ESPAD Ireland: A forward stepwise logistic regression model

[Joan Hanafin](#)<sup>1,2</sup>, [Salome Sunday](#)<sup>1,2</sup>, [Luke Clancy](#)<sup>1</sup> 

ABSTRACT

Journal of Public Health: From Theory to Practice  
<https://doi.org/10.1007/s10389-021-01610-1>

ORIGINAL ARTICLE

## E-cigarettes and smoking in Irish teens: a logistic regression analysis of current (past 30-day) use of e-cigarettes

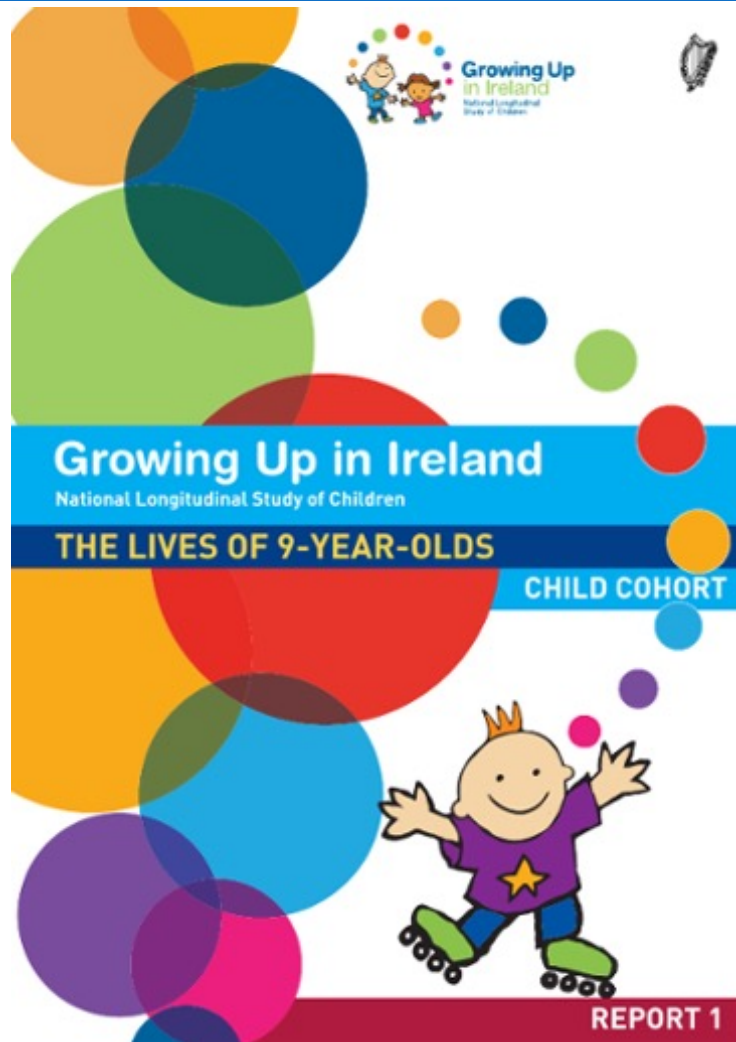
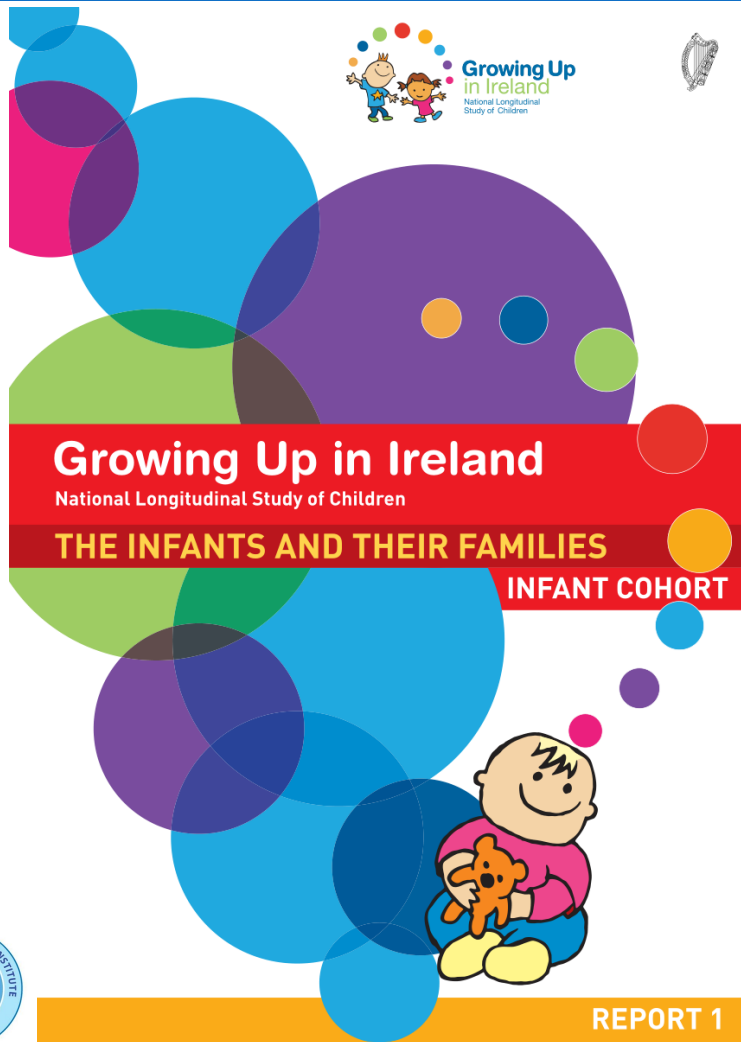
[Joan Hanafin](#)<sup>1</sup> · [Salome Sunday](#)<sup>1</sup> · [Luke Clancy](#)<sup>1</sup> 



## AIMS OF THIS STUDY

- To describe the prevalence of e-cigarette use in young Irish adults (20-year-olds)
- To identify risk factors associated with e-cigarette use in young Irish adults

# GROWING UP IN IRELAND: INFANT AND CHILD COHORTS



Wave 1 (2008)- 9 years  
Wave 2 (2012)- 13 years  
Wave 3 (2016/17)-17/18 years  
Wave 4 (2019)- 20 years  
Covid wave (Dec 2020)- 22 years

# METHODS



We used data from 5,190 20-year-olds in the Growing up in Ireland (GUI) survey (Wave 4, 2019)



We employed a cross-sectional approach to the GUI longitudinal dataset, analysing Wave 4 survey as a stand-alone dataset



Descriptive and Stepwise logistic regression analyses were used to examine e-cigarette prevalence, and factors associated with e-cigarette use in this age group.

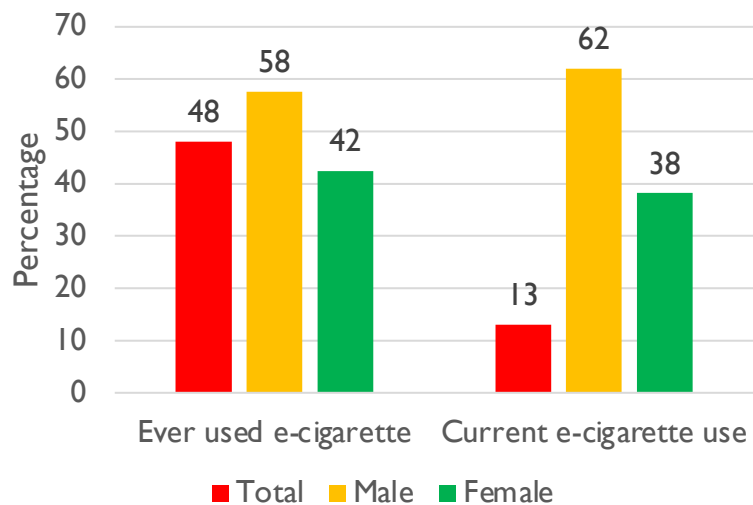


# VARIABLES INCLUDED IN THE MODEL

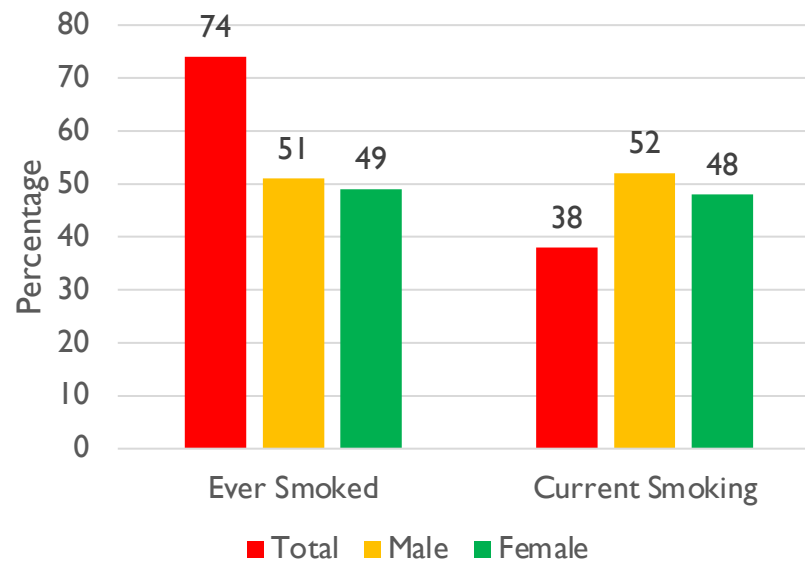


# RESULTS: PREVALENCE OF E-CIGARETTES, SMOKING AND DUAL USE

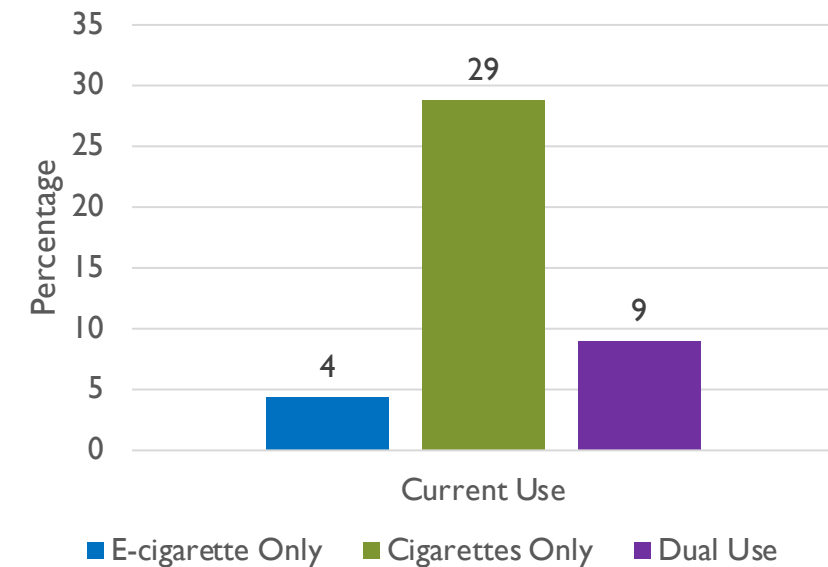
## Young Adult E-cigarette Use (n=5,190)



## Young Adult Smoking (n=5,190)



## Single and Dual Use (n=5,190)



# RESULTS OF STEPWISE LOGISTIC REGRESSION MODEL

	N (%) N=5190	Ever used e-cigarettes N=2460 (47.8%)	Current e-cigarettes use N= 690 (13.4%)
		AOR (95% CI)	AOR (95% CI)
<b>Gender</b>			
Female	2548 (49.10)	Reference	Reference
Male	2642 (50.90)	<b>1.63 (1.37, 1.94)</b>	<b>1.71 (1.30, 2.25)</b>
<b>Leaving Cert points</b>			
Low Achieving	1110 (23.32)	Reference	Reference
Medium Achieving	1438 (30.21)	<b>0.58 (0.45, 0.76)</b>	-
Medium High Achieving	1439 (30.23)	<b>0.45 (0.35, 0.58)</b>	<b>0.67 (0.49, 0.92)</b>
High Achieving	773 (16.24)	<b>0.30 (0.23, 0.40)</b>	<b>0.49 (0.32, 0.75)</b>
<b>Ever smoked</b>			
No	1344 (26.10)	Reference	Reference
Yes	3807 (73.90)	<b>2.99 (2.36, 3.78)</b>	<b>5.25 (2.66, 10.34)</b>
<b>Current smoking</b>			
No	3204 (62.20)	Reference	Reference
Yes	1947 (37.80)	<b>1.68 (1.38, 2.04)</b>	<b>3.22 (2.40, 4.31)</b>
<b>Ever alcohol use</b>			
No	185 (3.58)	Reference	-
Yes	4967 (96.42)	<b>3.65 (1.54, 8.62)</b>	-
<b>Ever tried cannabis</b>			
No	1992 (39.46)	Reference	Reference
Yes	3055 (60.54)	<b>2.28 (1.88, 2.76)</b>	<b>1.97 (1.41, 2.74)</b>
<b>Ever used non-prescribed drugs</b>			
No	3673 (71.55)	Reference	-
Yes	1460 (28.45)	<b>1.44 (1.14, 1.82)</b>	-
<b>Household type</b>			
Single	1139 (23.31)	-	Reference
Couple	3748 (76.69)	-	<b>0.61 (0.43, 0.85)</b>

- ✓ E-cigarette ever and current users were significantly more likely to be **male**, **ever-smokers**, **current smokers** and **ever cannabis users**.
- ✓ E-cigarette ever-users were more likely to **ever-use alcohol** and **non-prescribed drugs**.
- ✓ E-cigarette ever and current use was inversely associated with **higher leaving certificate points** and **being in two-parent families**

## Strengths

- Large sample size
- Variable richness
- Representativeness of the Growing up in Ireland dataset

## Limitations

- Cross sectional vs Longitudinal
- Self report of smoking and e-cigarette use

# CONCLUSION

- Ever and current e-cigarette use was high among 20-year-olds in this study, considerably higher than prevalence reported among 16-year-olds in the same year (2019) and than reported by other studies that included this age group
- Being male and being a smoker are risk factors for e-cigarette use
- Poly-drug use needs to be addressed simultaneously with e-cigarette for prevention strategies to be successful

# REFERENCES

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## Contact

Salome Sunday [salome@tri.ie](mailto:salome@tri.ie)  
Dr Joan Hanafin [jhanafin@tri.ie](mailto:jhanafin@tri.ie)  
Prof Luke Clancy [lclancy@tri.ie](mailto:lclancy@tri.ie)  
TobaccoFree Research Institute Ireland,  
TU Dublin, Dublin 8. <http://www.tri.ie>